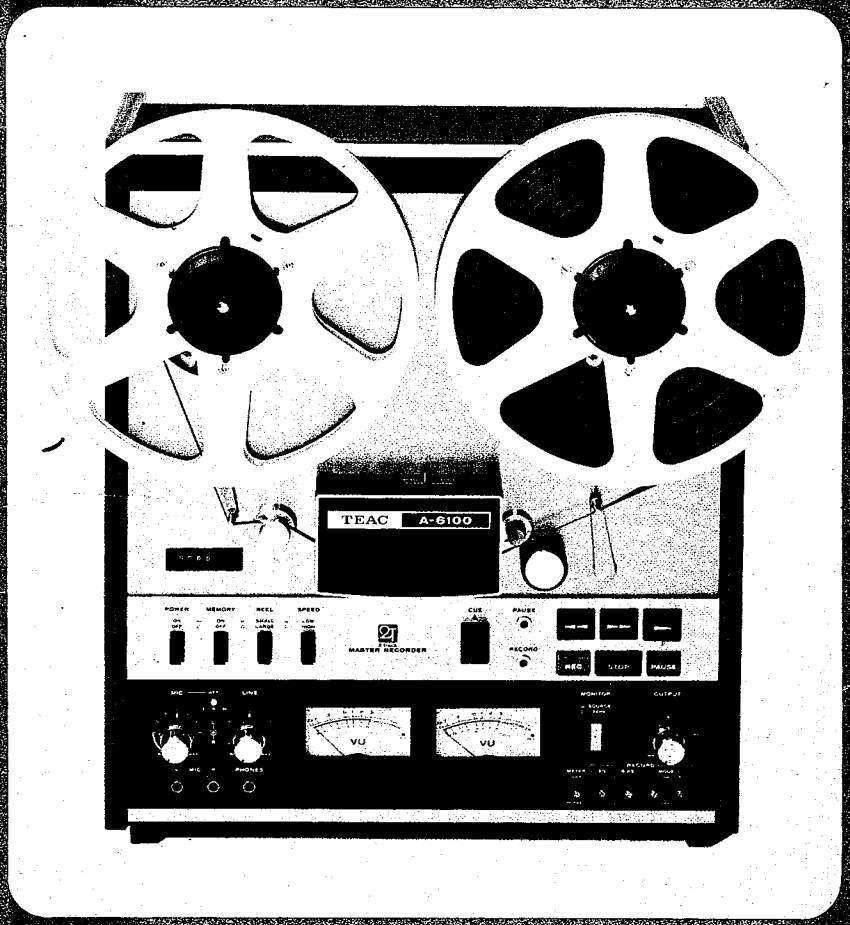
SERVICE MANUAL

A-6100/A-6300

STEREO TAPE DECK



TEAC®

TOKYO JAPAN

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NOTE

When placing an order for parts, please refer to the PARTS LIST and PRICE LIST FOR PARTS which are printed separately from this manual.

1. File the PARTS LIST manual together with this SERVICE MANUAL; future TECHNICAL INFORMATION SHEETS should also be kept with these.
2. Use the PARTS LIST manual and the PRICE LIST FOR PARTS when ordering replacement parts from TEAC Corp.

1. GENERAL DESCRIPTION

The TEAC A-6100/A-6300 is an excellent home entertainment stereo tape deck, built to semi-professional standards with 3 motors, 4 heads, two (selectable) meter scale ranges, and completely push-button controlled operation. Accepts either 7" or 10-1/2" reels, and has tape speeds of 3-3/4 ips and 7-1/2 ips (A-6300) or 7-1/2 ips and 15 ips (A-6100). Special features include switch-selected Bias and Equalization; two Line Input and two Line Output jacks per channel; facilities for (optional) remote/timer controlled operation; and special features for the A-6100 such as 4-Track playback; MIC ATT; and choice of 0.3 V or 0.775 V "0 VU" level at the OUTPUT jacks.

Although the A-6100/A-6300 internally appears to be similar to other TEAC models (esp. A-4300), significant differences require consulting this manual before any attempt to service the deck. This A-6100/A-6300 Service Manual/ Parts Manual contains adjustment and alignment information, part replacement reference, and other information about obtaining new parts.

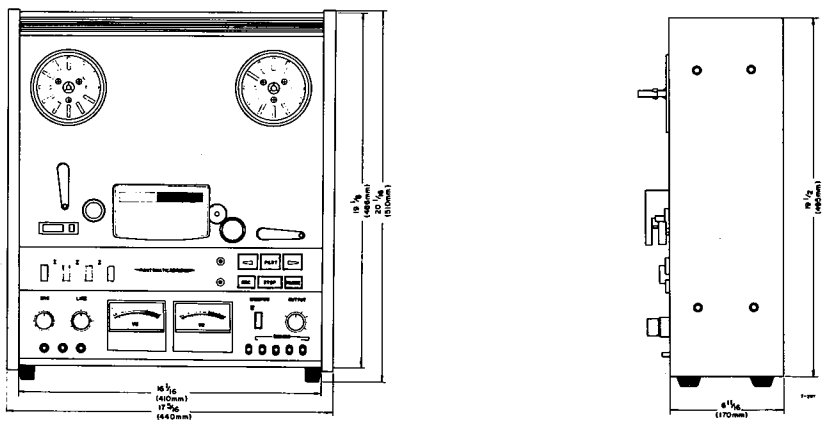
If adjustments or repair procedures are not sufficiently clear or seem too difficult to accomplish, or for more detailed technical information, you may contact the nearest TEAC Distributor, a TEAC affiliated subsidiary corporation, or the TEAC Corporation. TEAC addresses are found at the back of this manual.

FEATURE COMPARISON CHART A-6100 :: A-6300

Tape Speed (ips)	15, 7½	7½, 3¾
Automatic Reverse play	NO	YES
Counter Repeat (Playback)	NO	YES
Memory AUTO-STOP	YES	NO
Mic Attenutor	YES	NO
Peak Level Indicators	YES	NO
Flip Open Head Housing	YES	NO
0 VU Marker for OUTPUT	YES	NO
Playback Track Selector	YES	NO
Output Level Selector	YES	NO

Other minor design changes were also incorporated for specific differences in parts and circuitry please consult the Parts List and Schematic Diagrams.

DIMENSIONS



2-1. SPECIFICATIONS

ELECTRICAL A-6100

FREQUENCY RESPONSE:	Overall from recording INPUT to playback OUTPUT 15ips ••• 40Hz∿26kHz ±3dB 7-1/2ips ••• 40Hz∿24kHz ±3dB (Measured at 20 dB below the Specified Level)
INPUT IMPEDANCE:	a) MIC: 10kΩ (600Ω∿10kΩ) b) LINE:50kΩ
OUTPUT LOAD IMPEDANCE:	a) LINE: approx. 0.3V/10kΩ 0.775 V/10kΩ b) HEADPHONE: 0.3mW/8Ω
EQUALIZATION:	15ips •• NAB 50μsec. 3180μsec. 7-1/2ips •• NAB 50μsec. 3180μsec.
INPUT LEVEL:	a) MIC: -70dB±$^{0}_{2}$dB (0.25mV) min. b) LINE: -8dB (308mV) -18dB $^{0}_{2}$dB (97mV) min. c) DIN: -38dB ±2dB min.
OUTPUT LEVEL:	a) OUTPUT: -8dB, 0dB selector b) HEADPHONE: -24dB±$^{2}_{0}$dB (4.9mV) c) DIN: -8dB
BIAS FREQUENCY.:	100kHz (±5kHz; Push-pull oscillator)
CHANNEL SEPARATION:	45dB or more, channel to channel at 1kHz
ERASE EFFICIENCY:	65dB or more

ELECTRICAL A-6300

FREQUENCY RESPONSE:	Overall from recording INPUT to playback OUTPUT 7-1/2ips ••• 40Hz∿24kHz ±3dB 3-3/4ips ••• 40Hz∿16kHz ±3dB (Measured at 20 dB below the Specified Level)
INPUT IMPEDANCE:	a) MIC: 10kΩ (600Ω∿10kΩ) b) LINE:50kΩ
OUTPUT LOAD IMPEDANCE:	a) LINE: approx. 0.3V/10kΩ b) HEADPHONE: 0.3mW/8Ω
EQUALIZATION:	7-1/2ips •• NAB 50μsec. 3180μsec. 3-3/4ips •• NAB 90μsec. 3180μsec.
INPUT LEVEL:	a) MIC: -70dB $^{0}_{2}$dB (0.25mV) min. b) LINE: -8dB (308mV) -18dB $^{0}_{2}$dB (97mV) min. c) DIN: -38dB ±2dB min.
OUTPUT LEVEL:	a) OUTPUT: -8dB -2dB±$^{2}_{0}$dB (610mV) max. b) HEADPHONE: -24dB±$^{2}_{0}$dB (4.9mV) c) DIN: -8dB -2dB±$^{2}_{0}$dB max.
BIAS FREQUENCY.:	100kHz (±5kHz; Push-pull oscillator)
CROSSTALK REJECTION:	45dB or more, adjacent track at 125 Hz
CHANNEL SEPARATION:	50dB or more, channel to channel at 1kHz
ERASE EFFICIENCY:	68dB or more

NOTE

Value of "dB" in the test refer to 0 dB=0.775V, except where specified. If a Test Set or an AC VTVM calibrated to 0 dB = 1V is to be used, appropriate compensation should be made.

Refer to the TEAC DECIBEL TABLE on page 45 to obtain conversion of millivolts to dB should your meter not have a dB scale.

2-2. SPECIFICATIONS

MECHANICAL A-6100

TYPE:	a) 2 track 2 channel stereophonic b) 2 track 2 channel monophonic c) 2 track 1 channel monophonic
HEADS:	Erase head × 1, Record head × 1, 2-T Playback × 1 4-T Playback × 1
REEL SIZE:	10-1/2" maximum NAB reel
TAPE SPEED:	15ips (38cm/s), 7-1/2ips (19cm/s)
MOTORS:	6-pole eddy current motors for reel drive × 2 4/8 pole hysteresis synchronous motor for capstan drive × 1
WOW AND FLUTTER:	0.15% at 15ips (RMS) 0.18% at 7-1/2ips (RMS) Wow and flutter measured according to unweighted (RMS) NAB standard using TEAC YTT-2004/2003 flutter free tape. Above value is measured during playback.
FAST WINDING TIME:	Approx. 140 seconds or less with 1800 ft tape
OPERATING POSITION:	Horizontal or vertical
POWER REQUIREMENT:	DM : 100V/50Hz, 60Hz EX : 100, 117, 220, 240V/50Hz, 60Hz TCA: 117V/60Hz * TCA models for TEAC CORPORATION OF AMERICA
POWER CONSUMPTION:	DM: 90W, EX: 122W, TCA: 122W
WEIGHT:	22 Kg net

MECHANICAL A-6300

TYPE:	a) 4 track 2 channel stereophonic b) 4 track 2 channel monophonic c) 4 track 1 channel monophonic
HEADS:	Erase head × 1, Record head × 1, Playback head × 2
REEL SIZE:	10-1/2" maximum NAB reel
TAPE SPEED:	7-1/2ips (19cm/s), 3-3/4ips (9.5cm/s)
MOTORS:	6-pole eddy current motors for reel drive × 2 4/8 pole hysteresis synchronous capstan motor × 1
WOW AND FLUTTER:	0.18% at 7-1/2ips (RMS) 0.20% at 3-3/4ips (RMS) Wow and flutter measured according to unweighted (RMS) NAB standard using TEAC YTT-2002/2003 flutter free tape. Above value is measured during playback.
FAST WINDING TIME:	Approx. 160 seconds or less with 1800 ft tape
OPERATING POSITION:	Horizontal or vertical
POWER REQUIREMENT:	DM : 100V/50Hz, 60Hz EX : 100, 117, 220, 240V/50Hz, 60Hz TCA: 117V/60Hz * TCA models for TEAC CORPORATION OF AMERICA
POWER CONSUMPTION:	DM: 101W, EX: 135W, TCA: 135W
WEIGHT:	22 kg net

NOTE

As a result of continuing changes and improvements during the production run, minor difference may be found between early and later machines.
Refer to TEAC TECHNICAL INFORMATION sheet for information concerning modifications.

3. TOOLS FOR TESTING AND MAINTENANCE

A minimum of the following tools and test instruments are required for measuring and adjusting to obtain optimum performance. Regular maintenance tools will be adequate for those not listed here. If any test instrument listed here is not available, a close equivalent can be used.

SPRING SCALE	0∿4 kg (0∿8 lbs), 0∿300 g (0∿10 ozs)
FLUTTER METER	Meguro Denpa Co., Model MK665B (preferred) or Sentinal Co., Model FL-3D-1
DIGITAL COUNTER	Range - 0 Hz∿100 kHz
BANDPASS FILTER	TEAC Model M-206A (1 kHz)
VTVM	Hewlett-Packard Co., Model 4302B
OSCILLOSCOPE	General purpose
BLANK TAPE	TEAC YTT-8013 and YTT-8003
TEAC TEST TAPE	Refer to the next page
EMPTY REEL	**TEAC** RE-702 (2" hub) and RE-701 (4" hub) RE-1002 10-1/2" reel
TEAC TEST SET*	M-826A

* Use of the TEAC M-826A Test Set is recommended. This set incorporates an AC VTVM, Audio Oscillator, Channel Selecting switch, Variable Attenuator, Monitor Speaker and Cables.

TEAC M-826A measures the RMS value of the Voltage (0 dB = 0.775V). Characteristics of this Test Set are similar to the standard VU-meter.

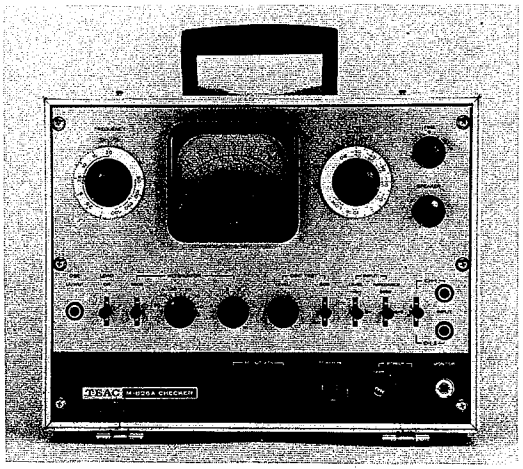


Fig. 3-1 TEAC Test Set

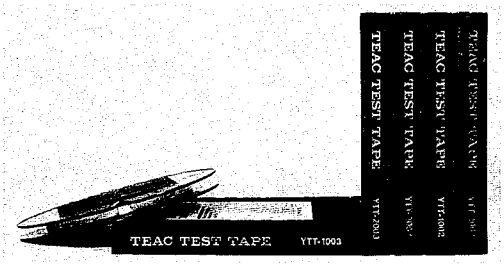


Fig. 3-2 TEAC Test Tape

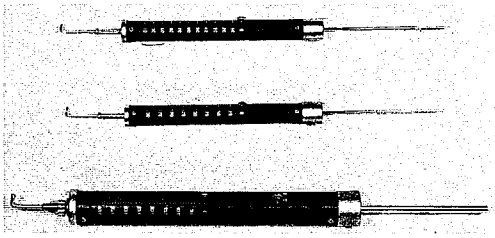


Fig. 3-3 Spring Scale

4. TEAC TEST TAPE -YTT SERIES-

- PLAYBACK ONLY -

TEAC-YTT Series Test Tapes are designed for aligning and checking the playback system performance of any tape recorder. They have been manufactured to be within close tolerance to the NAB Standard, and the recorded signal format has been arranged for maximum convenience during test procedures.

YTT-1002/1003/1004 (FOR PLAYBACK ALIGNMENT)

TYPE			YTT-1002	YTT-1003	YTT-1004	REMARKS
TITLE			PLAYBACK ALIGNMENT			
TAPE	WIDTH		1/4 INCH			
	BASE		1 MIL	1 MIL	1-1/2 MIL	
TAPE SPEED(ips)			3-3/4	7-1/2	15	Accuracy: 0.2% Wow and Flutter: 0.1%(WRMS)
RECORD TRACK			FULL TRACK			
RECORDING CHARACTER-ISTICS	STANDARD		NAB			
	TIME CONSTANT (μs)		3180+90	3180+50	3180+50	
	TOLER-ANCE	WITHIN 0.5dB	31.5-4KHz	31.5-10KHz	31.5-16KHz	Azimuth Angle Tolerance: 90°±1.5′
		WITHIN 1 dB	8K-14KHz	12.5KHz-20KHz	18K-22KHz	

	SECTION	FREQUENCY (Hz) YTT-1002	YTT-1003	YTT-1004	LEVEL	TIME	USE
RECORDED SIGNAL	1	400	400	400	* 0dB	30s	Operating Reference Level Calibration
	2	7,500	15,000	15,000	-10dB	60s	Azimuth Alignment
	3	400	400	400		15s each	Frequency Response Check
		14,000	20,000	22,000			
		12,000	18,000	20,000			
		10,000	16,000	18,000			
		8,000	12,000	16,000			
		6,300	10,000	12,500			
		4,000	6,000	10,000			
		2,000	4,000	6,300			
		1,000	2,000	4,000			
		500	1,000	2,000			
		250	500	1,000			
		125	250	500			
		80	125	250			
		63	80	125			
		40	63	80			
		31.5	40	63			
			31.5	40			
				31.5			

* 0dB recording level is 6dB below the 3% T.H.D. level

YTT-2002/2003/2004 (FOR TAPE SPEED AND WOW-FLUTTER TESTING)

TYPE		YTT-2002	YTT-2003	YTT-2004	REMARKS
TITLE		TAPE SPEED AND FLUTTER TSET			
TAPE	WIDTH	1/4 INCH			
	BASE	1 MIL	1 MIL	1-1/2 MIL	
TAPE SPEED(ips)		3-3/4	7-1/2	15	
WOW AND FLUTTER		0.07%	0.05%	0.03%	Weighted RMS
RECORDED WIDTH		FULL TRACK			
RECORDED SIGNAL	FREQUENCY	3,000Hz			
	LEVEL	-5dB			0dB: Operating Reference Level
	TIME	7 MINUTES			

Since these tapes will be your own reference standard, care should be exercised, in handling and storage, not to expose them to any magnetic flux which might deteriorate or completely destroy the recorded signals. High temperature and humidity are also harmful to the tape.

5. TAPE TRANSPORT PARTS LOCATION

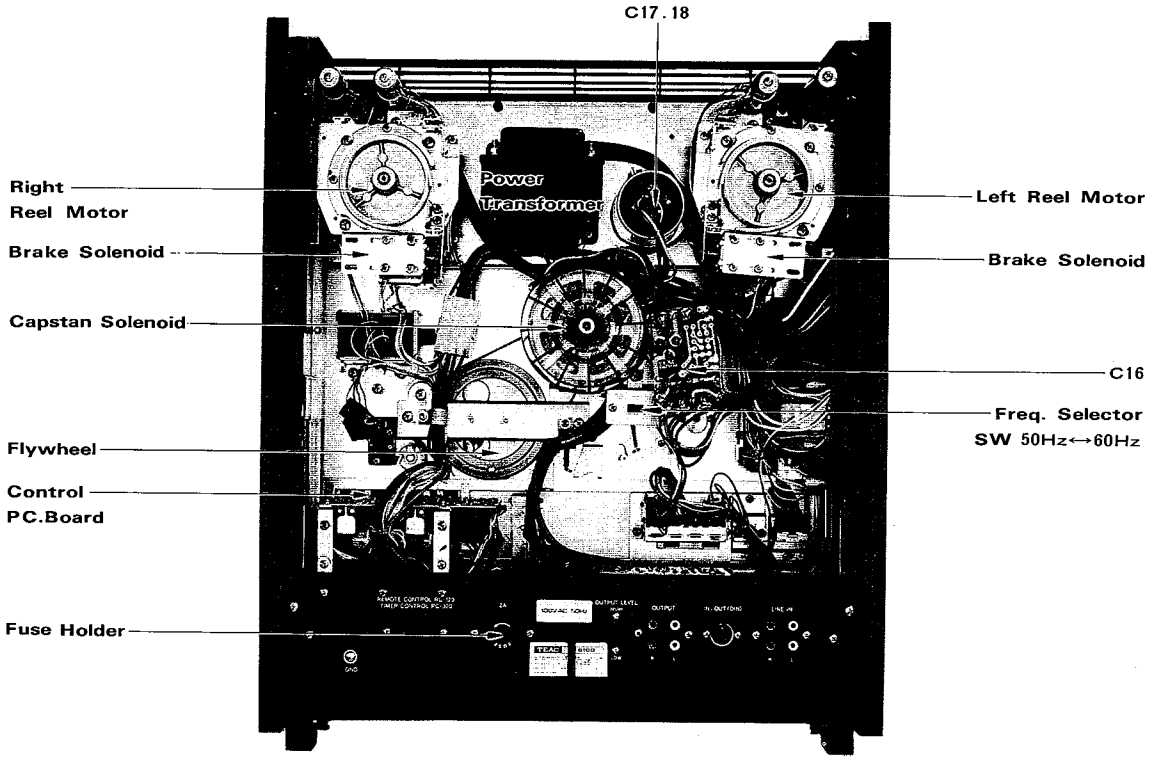


Fig. 5-1 Tape Transport Parts Location

NOTE

For ordering parts, refer to the exploded view of the PARTS LIST. An accompanying listing provides the correct part numbers.

6. PARTIAL DISASSEMBLY

REMOVING WOODEN SIDES AND REAR PANEL

See illustration for complete disassembly instructions.

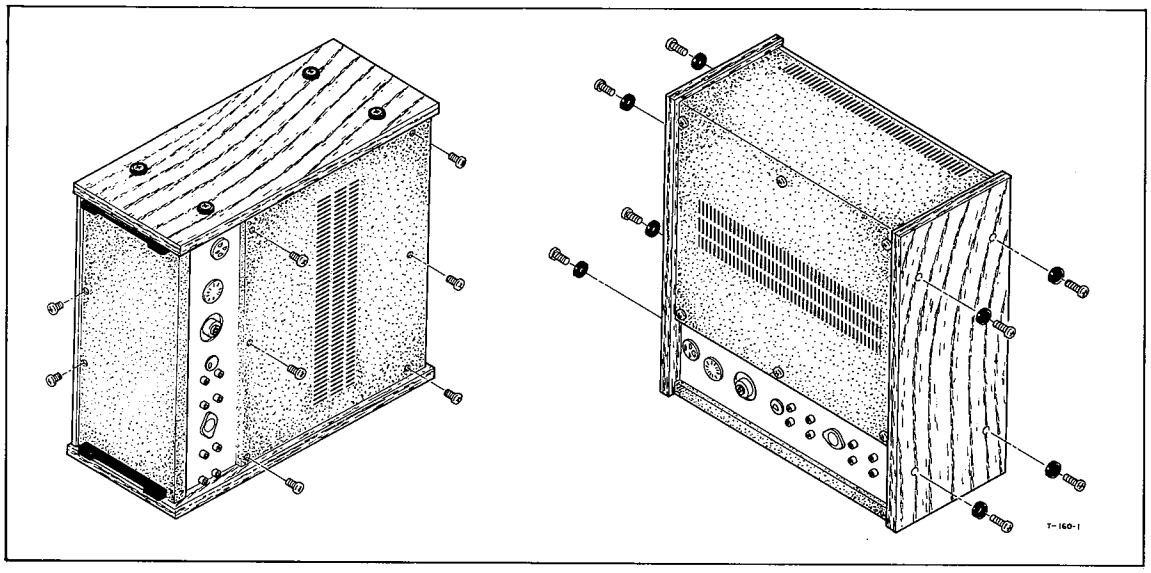


Fig. 6-1 Rear Panel and Bottom Plate

Fig. 6-2 Wood Sides

Most amplifier checks and adjustments can be made from the bottom with the plate removed.
These adjustments should be performed by experienced technicians, and then only when going through the complete test and check procedures on the unit which is being tested.

HEAD ASSEMBLY REPLACEMENT

To change the head assembly as a unit, remove the 4 mounting screws. Note the positions of the wires on the circuit board before unsoldering. Solder wires of the new assembly in exactly the same positions. Refer to Fig. 8-3 Head Wiring Section.

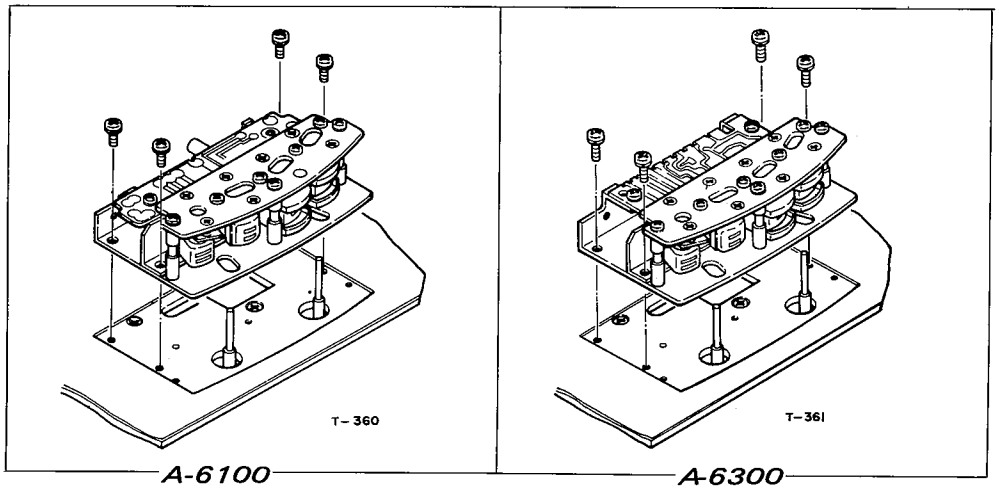


Fig. 6-3 Head Assy Removal

REMOVAL OF CAPSTAN MOTOR

1. Remove the 3 screws holding the capstan motor.
2. Unsolder the 6 wires connecting the capstan motor.
3. Remove the 4 screws holding the capstan motor. Watch for the Rubber Cushions.
4. Loosen the 2 set screws (hex head) in pulley and lift off pulley.

> NOTE
> Clean the drive belt with TZ-261B and the motor pulley and capstan flywheel with TZ-261A.
> Be sure to note the color code of the wires so you can replace them correctly.

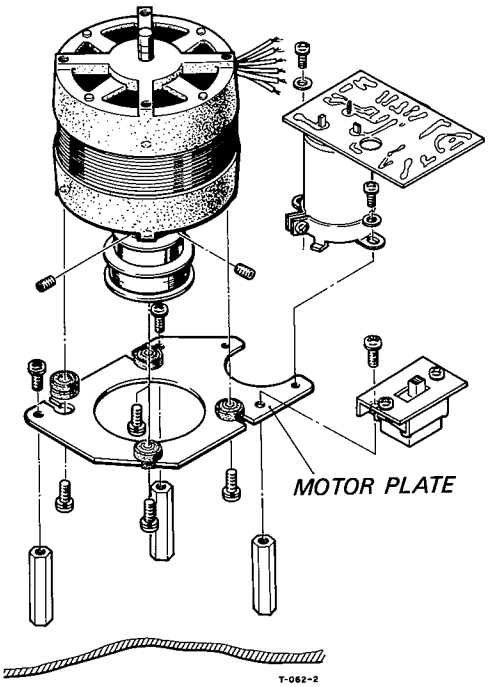


Fig. 6-4 Capstan Motor Removal

REMOVAL OF CAPSTAN ASSEMBLY

1. Unscrew capstan cover (front panel).
2. Remove 2 screws from rear bracket, allow bracket to drop toward floor of case.
3. Remove capstan belt.
4. Loosen 2 screws in capstan ass'y flywheel. Remove flywheel.
5. Remove 3 screws in capstan ass'y.
6. Gently move capstan ass'y up and down until it slides out of panel.

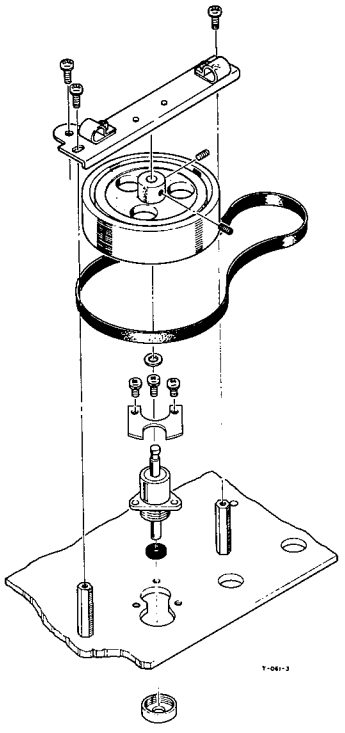


Fig. 6-5 Capstan Assy Removal

REMOVAL OF REEL MOTOR ASSEMBLY

1. Disconnect the 4 motor wires from terminals and release wire harness straps.
2. Loosen 2 set screws (hex head) in Brake drum (A) and 2 in the Reel Turntable assembly (F). Lift off these parts.
3. Remove 4 screws securing the Brake Assembly (D) to the motor. Carefully lift off the Brake Retainer (B) with its 2 wires still connected to the Brake Solenoid (C).
4. Remove 4 screws securing Reel Motor (E) to chassis through the front panel.

NOTE

Reel motor assemblies are mirror images of each other; these assemblies are not interchangeable.

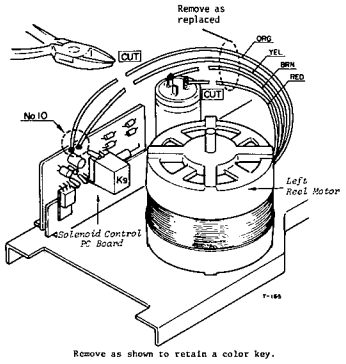


Fig. 6-6 Reel Motor Replacement Step 1.

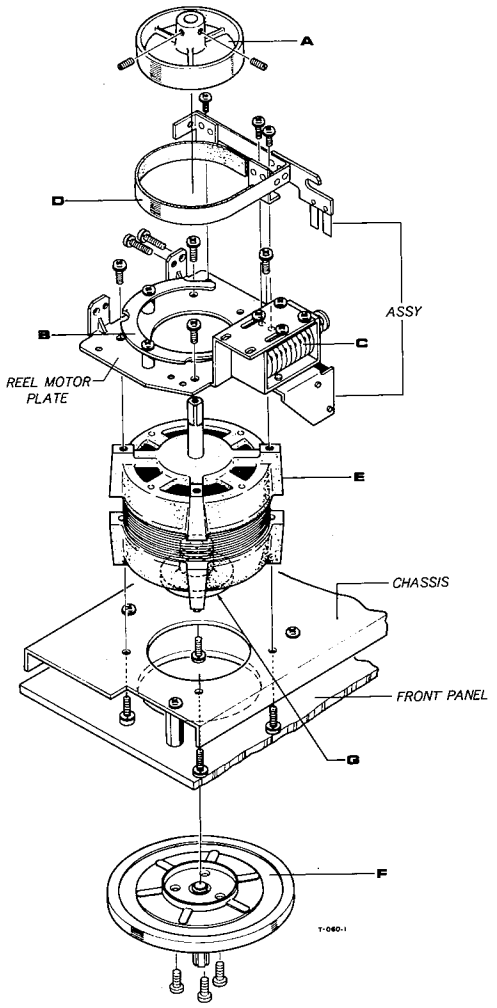
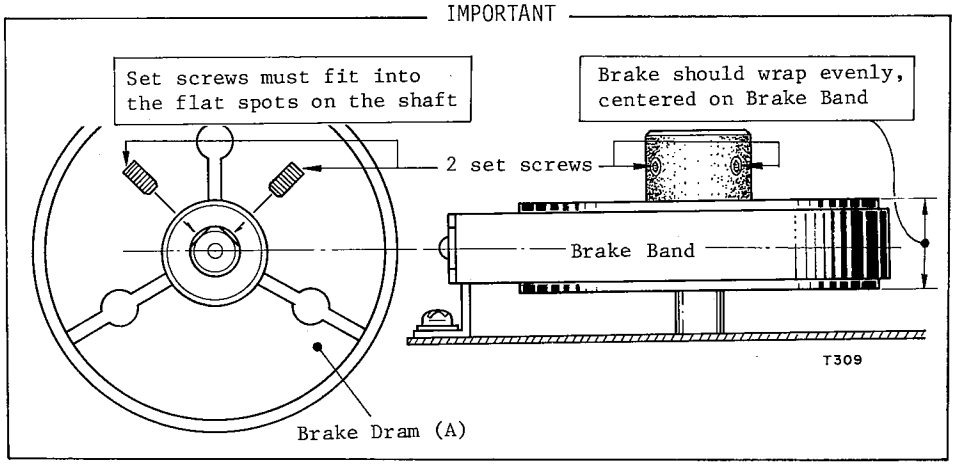


Fig. 6-7 Reel Motor Assy Disassembly



REMOVAL OF TENSION ARMS LEFT AND RIGHT

See illustration for complete disassembly instructions.

CAUTION

Do not over-tighten screws holding right tension arm. Insulating spacer and micro-switch are easily broken by excess pressure.

IMPORTANT

After reassembly check clearance to ascertain that arm moves freely and is not binding.

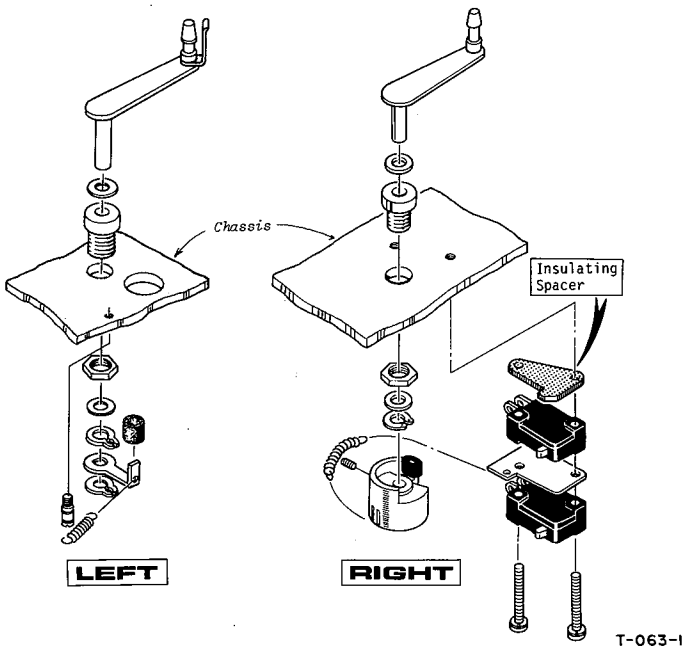
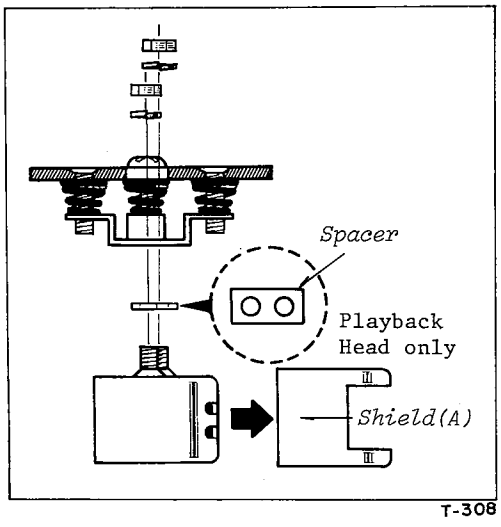


Fig. 6-8 Tension Arms Removal

HEAD REPLACEMENT

To replace a single head, a nut driver is required. Remove the 2 nuts on the defective head through the access hole provided, this releases the head from the mounting plate. Rewire the new heads as shown in Fig. 8-3.
Replace the nuts securing the new head to the plate. Perform head alignment before operation.



Fig, 6-9 Head Replacement

7. LINE VOLTAGE AND FREQUENCY CONVERSION

Unit must be set to the power line frequency available. Improper frequency setting will result in a 20% error between the tape speed and reel motors torque. Remove power plug before making voltage conv.

NOTE

If it should be necessary to convert the A-6100/A-6300 deck to operate from a power source of different voltage or frequency, it may be easily accomplished as follows:

US (TCA) model is preset to 117V AC and 60 Hz. No frequency conversion is required.

VOLTAGE CONVERSION:

The A-6100/A-6300 (EX) model may be set for 100,117,220,or 240 volts. To change the voltage, unscrew the fuse in the center of the voltage selector plug. Pull out the plug and reinsert it so the desired voltage shows in the cut-out. Reinstall the fuse.

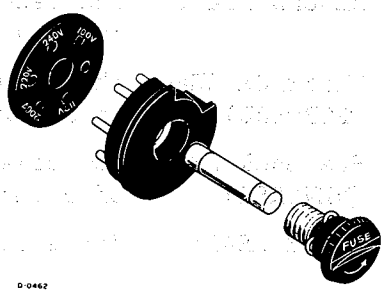
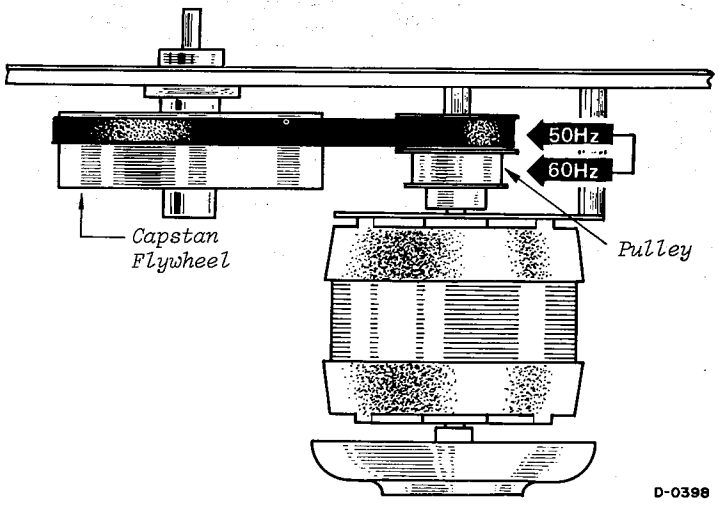


Fig. 7-1 Voltage Conversion

FREQUENCY CONVERSION:

1. Disconnect the power cord and all connecting cables.
2. Take off tape deck rear cover by removing the 6 screws holding it. The right side-panel may also be removed for your convenience.
3. To convert the unit from 50 to 60 Hz operation reposition the capstan belt as shown in the illustration below.
4. The frequency selector switch on the PC Board to the right of the capstan motor must be switched to the frequency of the power line.
5. Reinstall rear cover and side panel.



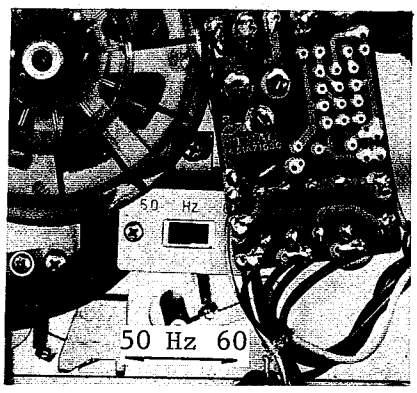


Fig. 7-2 Frequency Conversion

8. HEAD ALIGNMENT

HEAD ASSEMBLY (head cluster) is adjusted to very close tolerance at the factory and normally requires only minor alignments or adjustments after replacement on the deck. Complete readjustment of the HEAD ASSEMBLY will be necessary when an individual head is replaced.

HEIGHT ADJUSTMENT (4 track)

RECORD HEAD: The record head pole should be above the edge of a threaded tape by the width of a thin pencil line.

PLAYBACK HEAD: (FORWARD) The forward playback head pole should be even with the top of a threaded tape.

PLAYBACK HEAD: (REVERSE) The pole of the reverse head should be even with the bottom of a threaded tape.

ERASE HEAD: Erase section should be a heavy pencil line above.

NOTE

A-6100 2 track RECORD and ERASE heads are centered on the tape. PLAYBACK head forward section is a heavy pencil line above the edge. Refer to the illustration below.

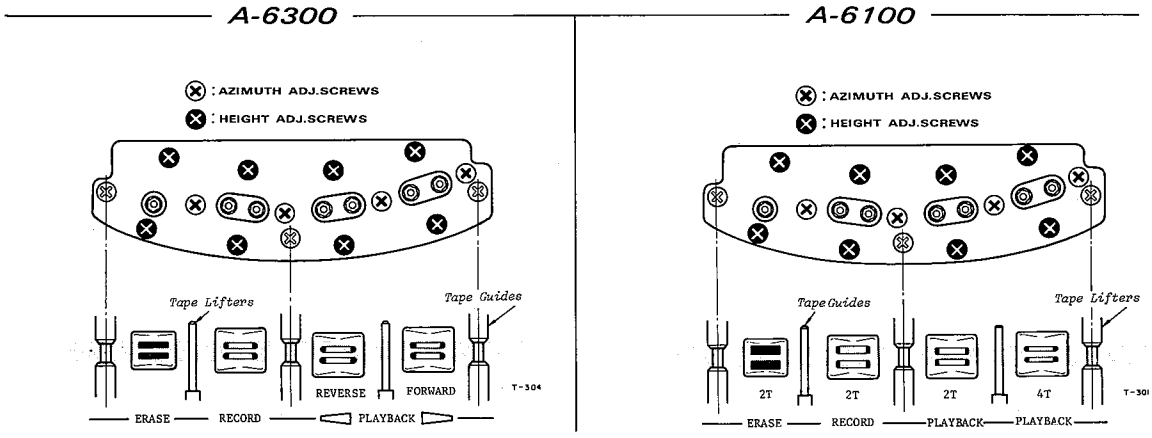


Fig. 8-1 Head Configuration and Alignment

MIS-ALIGNMENT OF THE HEADS -EXAMPLES-

* ALIGNMENT - The physical positioning of a tape head relative to the tape itself. Alignment in all respects must conform to rigid requirements in order for a unit to function properly.
* AZIMUTH - The angle of a tape head pole-piece gap relative to the direction of tape travel.

NOTE: In order for a tape unit to work at its best, with its own tapes as well as ones made on other units, its play and record heads must be aligned to correct the 4 possible errors as illustrated below.

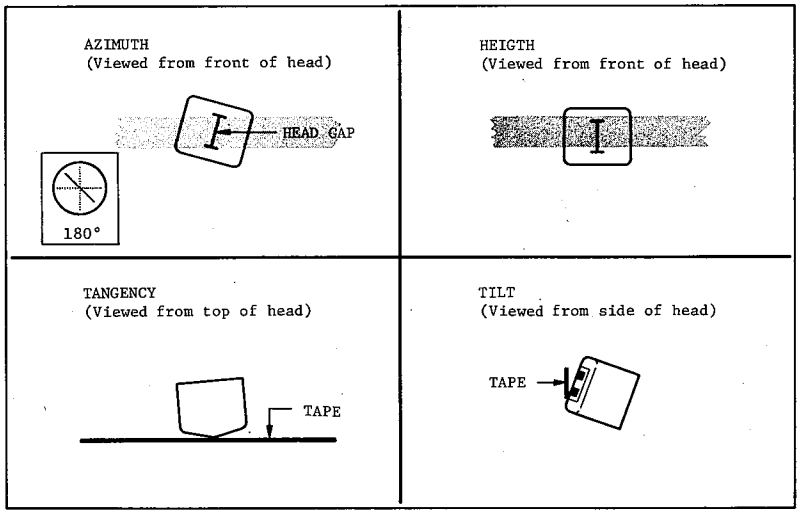
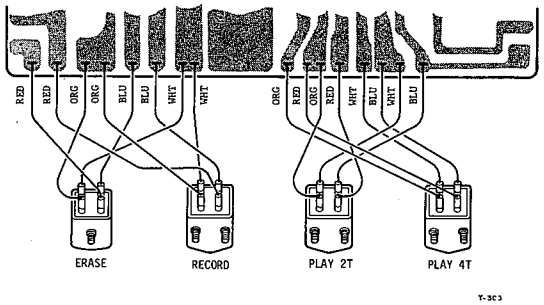
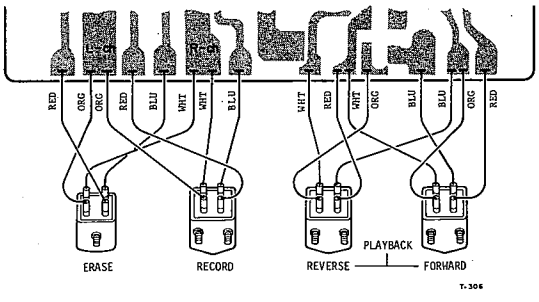


Fig. 8-2 Head Mis-Alignment -Examples-

HEAD WIRING



A-6100



A-6300

Fig. 8-3 Head Wiring

9. MEASUREMENT AND ADJUSTMENT
-MECHANICAL-

The TEAC A-6100/A-6300 uses a highly reliable 3 motor drive system and should require a minimum of mechanical maintenance or adjustment. These adjustments are made at the factory. Readjustment should only be required after long periods of operation or component replacement.

PINCH ROLLER PRESSURE

NOTE: Pinch roller pressure is supplied by the pinch roller spring arm and it is most important that the solenoid plunger be fully bottomed before taking pressure measurement.

1. Load tape or block the shut-off arm in the "ON" position.
2. Attach a suitable spring scale to the pinch roller shaft.
3. Place the unit in the PLAY mode (▶), and holding the spring scale as illustrated, slowly draw it away from the pinch roller.
4. Do not allow the string to rub against the pinch roller.
5. Note the reading on the spring scale at the instant the pinch roller stops rotating.
6. The scale should indicate 2.2∿2.5kg. Optimum value is 2.4kg ±0.1kg.
7. If adjustment is necessary, loosen the 3 screws on the capstan solenoid and position the solenoid for optimum pressure.
8. Adjust solenoid-limit position so that the gap between capstan shaft and pinch roller is approximately 7mm when solenoid is not actuated. Limit is adjusted by loosening the mounting screw (A), then sliding limit until proper gap is obtained.

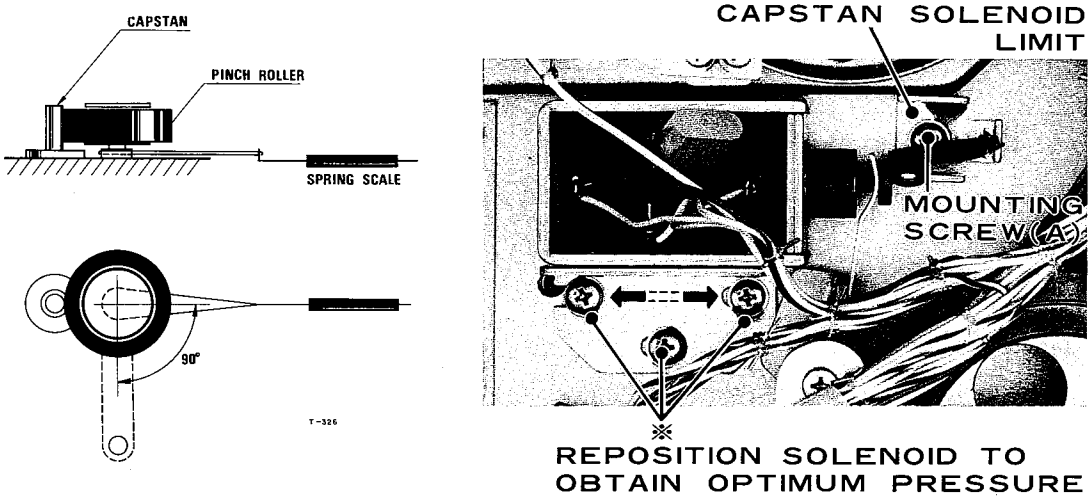


Fig. 9-1 Pressure Measurement and Adjustment Locations

BRAKE TORQUE

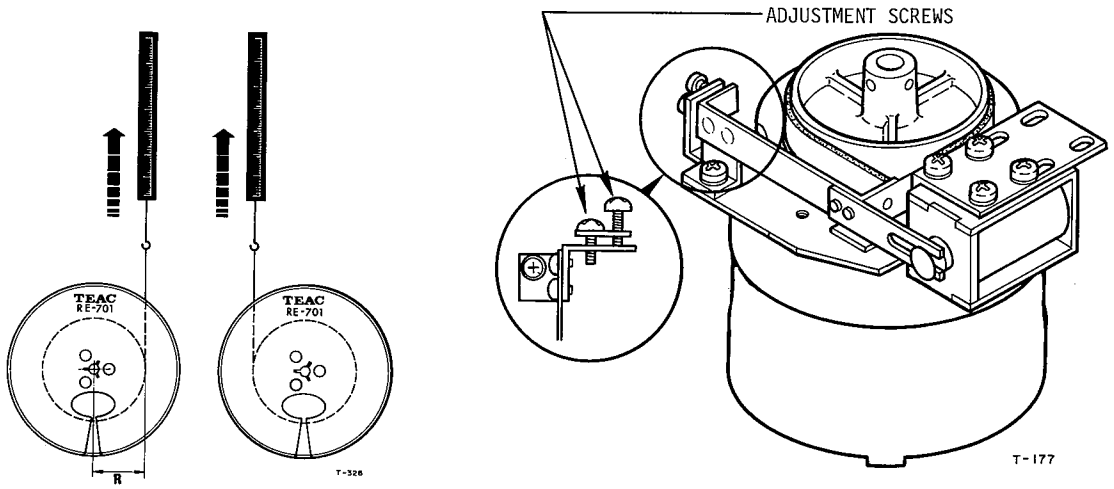
The brake torque is actuated mechanically. Pressure is set by the variable spring force. While making these measurements and adjustments, be careful not to bend the brake bands. As brake torque will change with cleaning, brake drums and brake shoes should be cleaned only when absolutely necessary. If cleaning is required, use TEAC cleaner TZ-261B. After cleaning operate the machine for a month of normal operation before performing the procedures below.

Brake adjustments are made with NO power connected to the equipment.

1. Place an empty 2" hub reel on the left reel table, and fasten one end of a 30" length of string to the reel anchor.
2. Wind several turns of string counterclockwise around the hub and attach a suitable spring scale to the free end of the string.
3. Take a reading only when the reel is in steady motion since the force required to overcome static friction will produce a false, excessively high initial reading.
4. The reading should be 1000 g-cm ±200 g-cm.
5. If adjustment is required, loosen the 2 screws shown and position the brake for optimum torque.
6. The adjustment of the right brake is the same, with the exception that rotations are clockwise.(Wind string CLOCKWISE around reel hub.)

NOTE: The difference in reading between the right and left brakes should be kept within 100 g-cm.

To measure torque when using a reel with a hub radius of other than 5.0cm refer to the following page.



Fi g. 9-2 Torque Measurement and Brake Assy ADJ. Location

TORQUE MEASUREMENT PROCEDURE

All Torque and Tension Measurement must be made with the automatic shut-off switch (right tension arm) blocked to the "ON" position.

BACK TENSION A-6100

1. Place the REEL size switch to the LARGE position.
2. Block the shut-off arm in the "ON" position.
3. Install an empty 7" reel (TEAC RE-702) on the left reel table.
4. Rotate the reel and wind several turns of string counter-clockwise around the hub. Attach spring scale to string.
5. Place the unit in the (▶) play mode.
6. Pull the scale away from the reel against the motor torque with a steady smooth motion.
7. Note the scale reading while it is in steady motion. (The string must not rub the reel flanges.)
8. Adjust R-11 as needed to obtain tension of 300-320 (g-cm). (calculated value using $T = R \times W$)
9. Repeat all the above for the REEL SMALL position. Reading should be 180-210 (g-cm) at R-12.

TAKE-UP TORQUE A-6100

1. Place the REEL size switch to the LARGE position, with empty reel and attached spring scale on the right reel table.
2. Place the unit in the (▶) play mode.
3. Allow the rotation of the reel to slowly draw the scale toward the hub.
4. Hold the spring scale with enough force to allow a steady reading.
5. It should be approx. 780-820 (g-cm). If adjustment is necessary, slide the band on R-10. (The same resistor is also used for SMALL REELS).

NOTE

To measure torque when using a reel with a hub radius of other than 3.0cm refer to following table;

FORMULA FOR TORQUE CALCULATION:

T (g-cm)$= R \times W$
R: radius of hub (cm)
W: gram

For example;

Radius of hub...3.0 (cm)
Scale indication...70 g
Absolute measurement....$3.0 \times 70 = 210$ (g-cm)

Use same procedure for the A-6300 using charts on next page.....

A-6300

Back tension and Takeup torque should be to exact specified Limits given in the charts below:
If necessary, adjust slider of the resistors until you have the correct scale reading to get optimum torque.
Refer to ADJUSTMENT LOCATIONS below.

FORWARD PLAY (►):

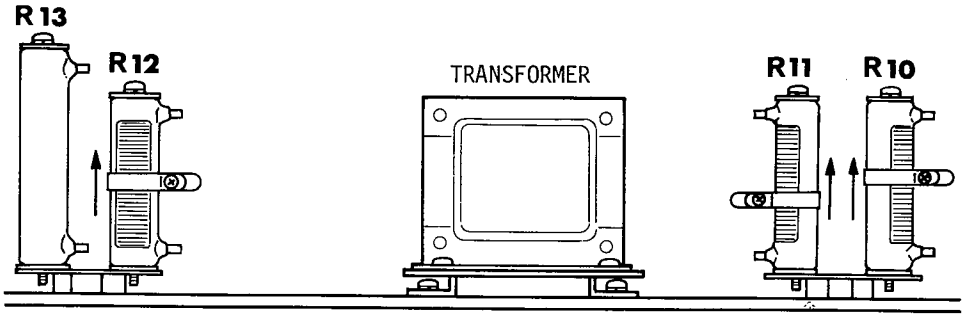
REEL SIZE	TAKEUP	ADJUSTER	BACK TENSION	ADJUSTER
LARGE	800-820 (g-cm)	R-19A	300-320 (g-cm)	R-25B
SMALL	370-410 (g-cm)		170-210 (g-cm)	R-18

REVERSE PLAY (◄):

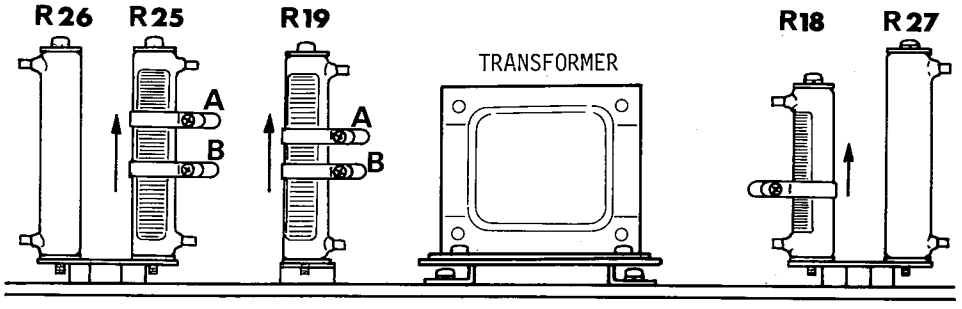
REEL SIZE	TAKEUP	ADJUSTER	BACK TENSION	ADJUSTER
LARGE	880-900 (g-cm)	R-25A	310-330 (g-cm)	R-19B
SMALL	430-470 (g-cm)		200-210 (g-cm)	R-18

REEL TORQUE ADJUSTMENT LOCATIONS

A-6100



A-6300



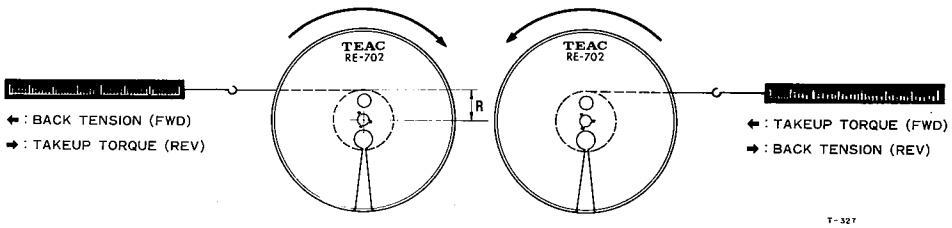


Fig. 9-5 Torque Measurement

REEL HEIGHT ADJUSTMENT

Reel height Adjustment is required only if a motor has been replaced or if tape rubs excessively against the reel flanges. Adjustment is accomplished by loosening the reel set screws and moving the reel table on the motor shaft as shown in the illustration below. Remove the wooden panel on the right side of the deck for access to the Set Screws in the reel motor shaft. Reel table should be adjusted using standard 7" reels. With a tape loaded on the machine, position the reel table height for smooth tape travel. Be sure to tighten the Set Screws after adjustment is made.

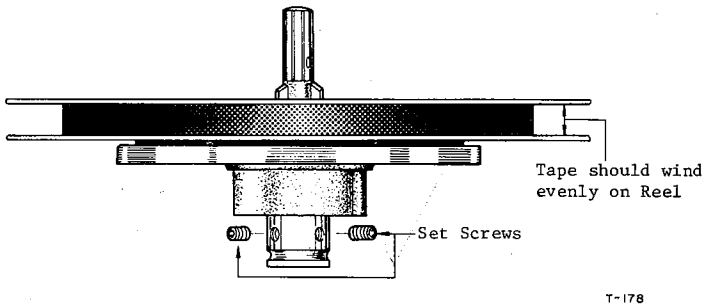


Fig. 9-6 Reel Height Adjustment

FLUTTER

Flutter should be measured in playback mode using a TEAC flutter free tape YTT-2004 (15ips), YTT-2003 (7-1/2ips), YTT-2002 (3-3/4ips) and MEGURO model MK-665B flutter meter. Measurement of flutter should be made in accordance with NAB standards. Values obtained with different standards or equipment cannot be compared.
Flutter should not exceed: 15ips: 0.15% (RMS)
7-1/2ips: 0.18% (RMS)
3-3/4ips: 0.20% (RMS)

These figures apply to any tape position and direction (such as full take-up reel, full supply reel or about mid point).
If there is excessive wow and flutter, examine the pinch roller, belt, motors, capstan shaft, and reel rest for "grease", "oil", "dirt" and/or "wear". Also examine the tape counter ass'y for evenness of operation.

TAPE SPEED

The tape speed should be measured using TEAC flutter free tape, Model YTT-2004 (15 ips), YTT-2003 (7-1/2 ips), YTT 2002 (3-3/4 ips). These tapes contain a highly accurate 3 kHz tone. Connect a digital frequency counter to either line OUTPUT jack. The indicated frequency should be 3 kHz (± 30 Hz or less) for both speeds.

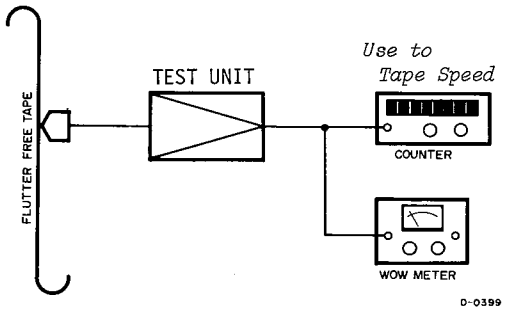


Fig. 9-7 Test Equipment Set-up

10. ELECTRICAL ADJUSTMENT

GENERAL NOTICE

* Before performing maintenance on this unit, thoroughly clean and demagnetize the entire tape path. TEAC maintenance equipment to be used:

  TEAC TZ-261 A/B for cleaning
  TEAC E-3 for demagnetizing

* The unit must be matched to the voltage and frequency of your locality.
* TEAC specified standard Test Tapes and test equipment must be used when performing maintenance to insure reliable results.
* Procedures for checks and adjustments, unless otherwise indicated, are for the left channel at a tape speed of 7-1/2 ips (19 cm). The same procedures are to be applied to the right channel and again for both channels at 15ips (38 cm).
* Power supply check and adjustment:
  Check the voltage at VR-1 and adjust to +24V DC if required. (Refer to Control Board drawing on the TAPE TRANSPORT CIRCUIT DIAGRAM.)
* All amplifier checks and adjustments can be made from the bottom of the deck with the cover removed.

ADJUSTMENT LOCATIONS

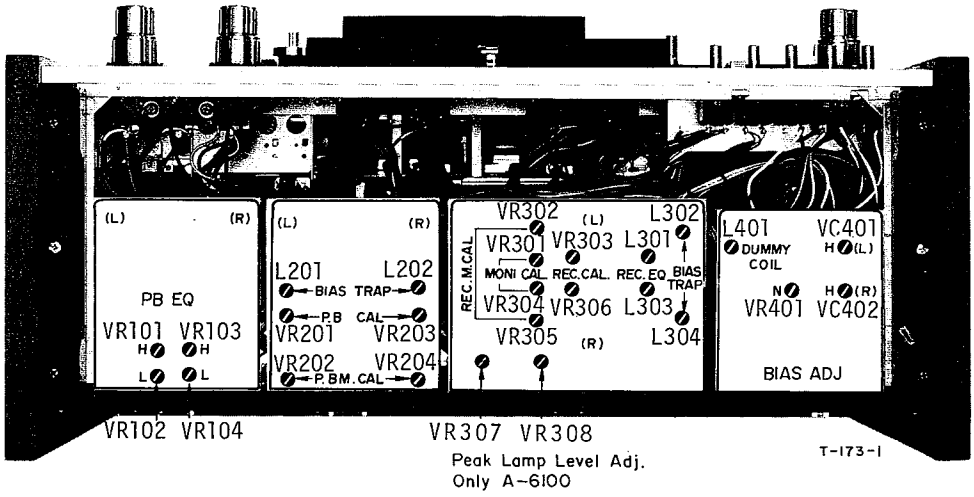
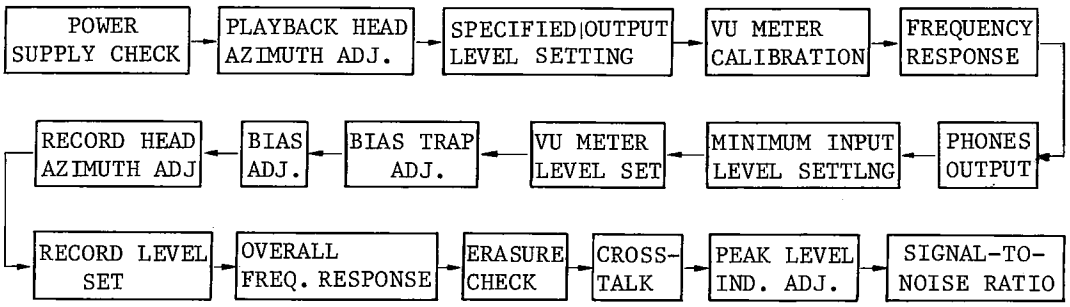


Fig. 10-1 Adjustment Locations
-Electrical-

A-6100 ONLY see page 30 for A-6300

11. MEASUREMENT AND ADJUSTMENT
-ELECTRICAL-

ADJUSTMENT SEQUENCE



PREPARATIONS

The following checks and adjustments must be performed with the switches of the A-6100 set as outlined below.

OUTPUT LEVEL SW → LOW (on the Rear Panel)
PLAYBACK HEAD SW → 2 track
METER SW → NORMAL
SPEED SW → LOW

PLAYBACK HEAD AZIMUTH ADJUSTMENT

NOTE: After head replacement or if, during playback, a slight pressure on the tape against the heads results in a higher indication at the Test-Set (M-826A), head azimuth should be readjusted.

Coarse Adjustment:

1. Connect a Test-Set to either OUTPUT jack; open the head housing.
2. Thread a TEAC Test Tape YTT-1003 on the unit.
   Play the 15 KHz Test Tone in Section 2 of the Test Tape.
3. Slowly rotate the azimuth screw until maximum indication is obtained on the Test-Set.
4. Repeat the procedure for the 4 track play head.

Fine Adjustment:

NOTE: It is absolutely essential to accomplish the coarse adjustment before performing the fine adjustment to avoid phase errors larger than 45°. After coarse adjustment, do not make large corrections, turn azimuth screw 1/4 turn or less.

5. Connect the test equipment as shown in Fig.11-1.
6. Play a 50 Hz∿10 kHz signal and adjust the azimuth screw until the oscilloscope shows that the signals are less than 45° out of phase (2 track and 4 track).
7. Secure the screw with a drop of Locking Paint.

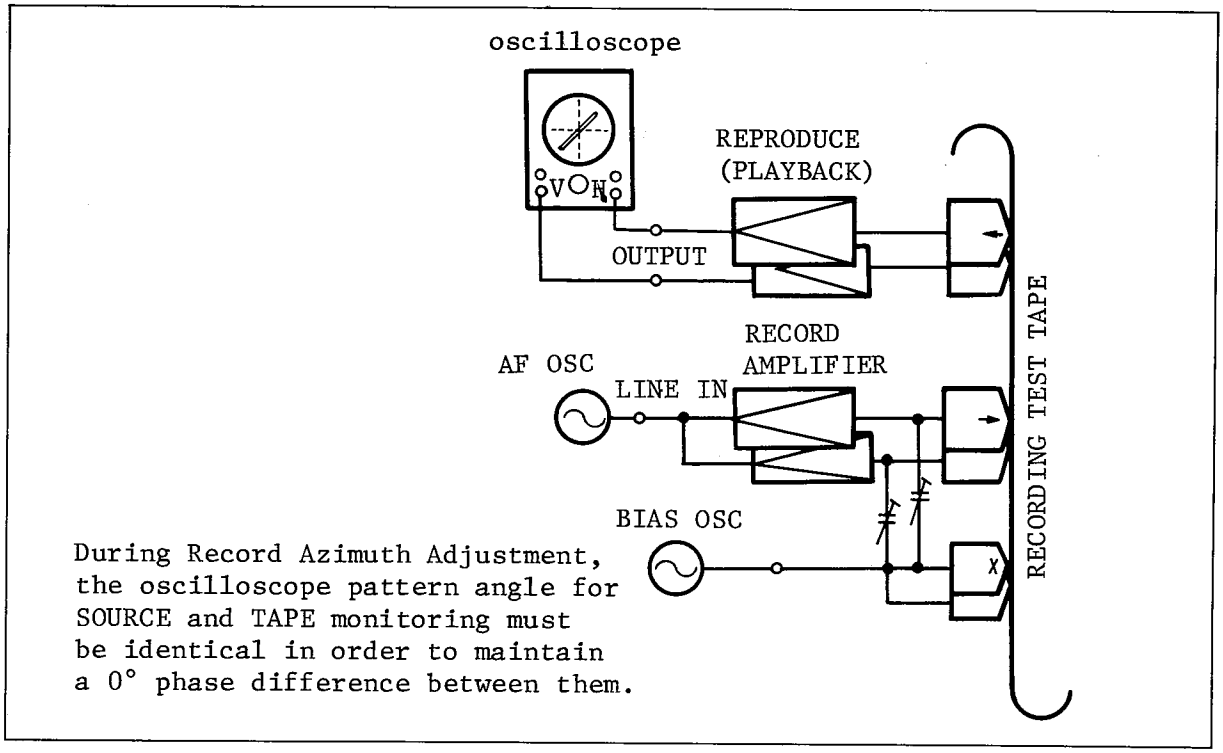


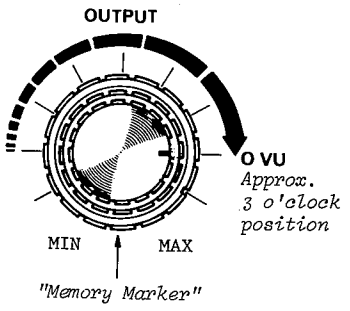
Fig. 11-1 Fine Adjustment Set-up
-Head Alignment-

SPECIFIED OUTPUT LEVEL SETTING

NOTE: Connect a 10kΩ load to the OUTPUT jacks for all audio measurements when not using TEAC Test Set (M-826A).

1. Place the MONITOR switch to the TAPE position.
2. Place the PLAYBACK HEAD switch to the 2 track position.
3. Turn the OUTPUT control fully clockwise (MAX).
4. Thread TEAC Test Tape YTT-1003 on the unit. Operate at LOW speed.
5. Play the 400 Hz signal in section 1 of the Test Tape.
6. Check for -5.5 dB at the OUTPUT jacks.
7. Align the reference marks on the controls so that they are at the 0 VU (3 o'clock) position. This will give approx. -8 dB at the OUTPUT jacks.
8. Readjust VR-201/203 for a -8 dB level at the OUTPUT jacks.

IMPORTANT: This is the specified output level setting. Do not disturb this setting until the remaining adjustments have been completed.



VU METER CALIBRATION

1. Place METER switch in NORMAL position. Playback head switch to 2 track.
2. Play the 400 Hz tone (1% THD) in Section 1 of the Test Tape.
3. With MONITOR switch at TAPE position, adjust VR-202/204 for a reading of 0 VU on the lower scale of the VU meter.

FREQUENCY RESPONSE 2T.4T

The following check should be run on both PLAYBACK heads (2T and 4T)

1. Place Tape SPEED switch in LOW position.
2. Thread a TEAC Test Tape YTT-1003 on the unit.
3. Compare the readings obtained on the Test Set with the response limits given in Fig. 11-2.
4. If adjustment is required, adjust VR-101/103 for Equalization at 7-1/2 ips (19 cm) speed.
5. Place Tape SPEED switch in HIGH position.
6. Thread a TEAC Test Tape YTT-1004 on the unit.
7. Repeat step 3. Check for best frequency response.
8. If adjustment is required, adjust VR-102/104 for Equalization at 15ips (38 cm) speed.

NOTE

If the frequency response does not meet specified response limits especially at the high end, the specified head should be carefully recleaned. If frequency response is still out of specifications, head azimuth must be re-adjusted.

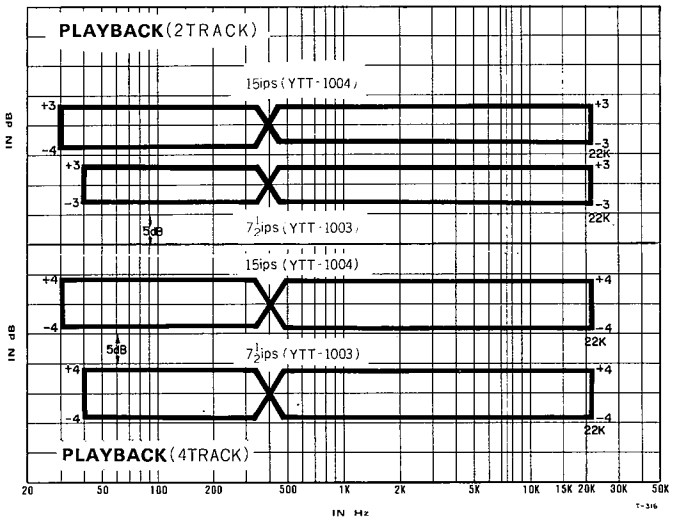


Fig. 11-2 Frequency Response Limits -Playback-

NOTE

If the frequency response does not meet specified response limits, especially at the high end, the specified head should be carefully recleaned. If frequency response is still out of specifications, head azimuth must be re-adjusted.

DIFFERENCE LEVEL (Between Channels)

With a Test-Set connected to the OUTPUT jacks and using TEAC Test Tape, the readings listed below should be obtained at the specified frequency and tape speeds.

0.5 dB or less at 400 Hz signal
3 dB or less at 40 Hz-22 KHz (HIGH speed)
40 Hz-14 KHz (LOW speed)
4 dB or less at 400 Hz- 16 KHz for 4 track

PHONE OUTPUT CHECK

1. Place OUTPUT controls at the Specified Level Setting with a reference input 400 Hz signal at -8 dB.
2. Connect an 8Ω non-inductive resistor across the headphone output (PHONES). Connect Test Set across the resistor.
3. Test Set should indicate -24 dB ±2 dB.

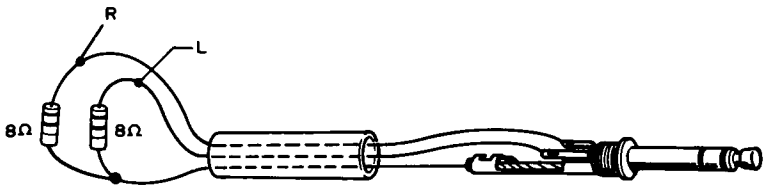


Fig. 11-3 Headphone Load Resistors

MINIMUM INPUT LEVEL SETTING

LINE Input:

1. Connect an AF oscillator to the LINE IN jacks.
2. Place MONITOR switch in SOURCE; EQ switch and BIAS switch in #1 position; RECORD MODE switches in ON position.
3. Apply a 400 Hz signal at -18 dB to the LINE IN jacks.
4. Turn LINE input controls fully clockwise, adjust VR-301/304 to obtain the specified output level of -8 dB at OUTPUT jacks.

MIC Input:
[This is a check only. No adjustments are to be made.]

5. After adjusting VR-301/304, apply a 400 Hz signal at -70 dB to the MIC IN jacks. MIC ATT switch in 0 position.
6. Rotate the MIC controls fully clockwise. This should give an output of -8 dB (specified output level) at OUTPUT jacks.

NOTE: Return MIC controls fully counterclockwise (CCW) to prevent noise insertion during the following steps.

VU METER LEVEL SET

Verify OUTPUT Controls to be at the Specified output level.

1. Place the MONITOR switch to the SOURCE position. METER switch in NORMAL.
2. Apply a 400 Hz signal at -8 dB to LINE IN jacks.
3. Adjust VR-302/305 for 0 VU (±0.5) on the VU meter.
4. Move the OUTPUT LEVEL switch (on the Rear Panel) to HIGH position. Check for 0 dB ±1dB indication at the Test Set meter.
5. VU indication variation spec. is ±0.5 VU or less.
6. Return OUTPUT switch to LOW position.

BIAS TRAP ADJUSTMENT

The following check and adjustments must be performed with the EQ switch in the #1 position.

1. Place BIAS switch in #1 position, MONITOR switch in TAPE position, and RECORD MODE switch to "ON". Depress REC and PAUSE buttons.
2. Connect a VTVM or oscilloscope to the junction of C-320/L-302 (Left channel), C-344/L-304 (Right channel).
3. Adjust L-302, L-304 for minimum reading.

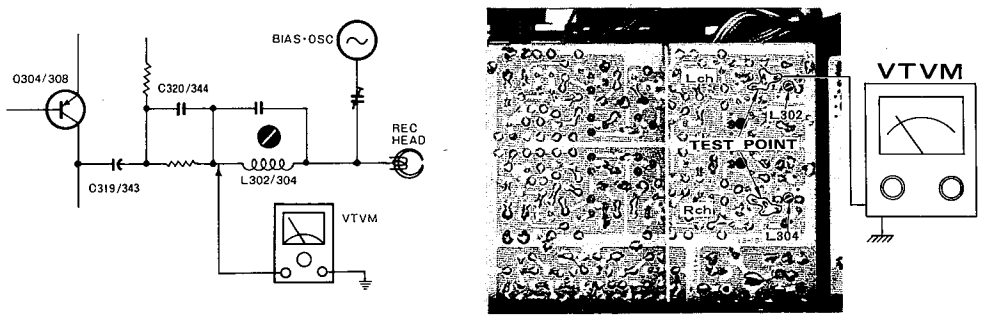


Fig.11-4 Bias Trap Check Point and Adjustment Locations

BIAS ADJUSTMENT

NOTE: Adjust bias traps (above) before proceeding. The following adjustments are made only at 7-1/2 ips (19 cm) tape speed. The bias oscillator frequency is 100 kHz (±5 kHz).

RECORD BIAS switch #1 position

1. Thread record Test Tape YTT-8013 on the unit.
2. Place the REC BIAS switch to #1 and place the unit in the record mode.
3. Place the MONITOR switch in the TAPE position.
4. Apply a 7 KHz signal at -18dB to the LINE IN jack.
5. While recording, adjust capacitor VC-401/402 for peak recording on the Test Set. From the peak, turn the capacitors clockwise until a decrease of 2.5 dB is obtained.(N.B.: This will be slight overbias setting as is usually preferred.)

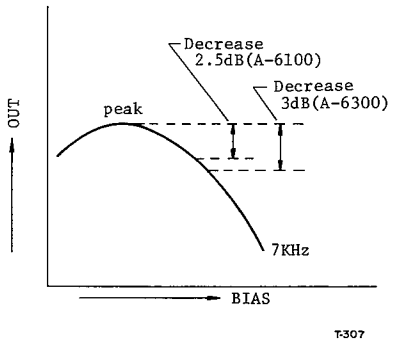


Fig. 11-5 Bias Limits Chart

RECORD HEAD AZIMUTH ADJUSTMENT

Coarse Adjustment:

NOTE: The effect of turning the azimuth screw will not immediately register on the Test Set. A slight delay will be noticed. Therefore, the screw must be rotated slightly with a pause to see the effect.

1. Connect a Test Set to the OUTPUT jack and an AF oscillator to the LINE IN jack, then set the AF oscillator to 10 kHz.
2. Make certain that the LINE controls are at the Specified Input Level positions.
3. Place the MONITOR switch to SOURCE and adjust the AF oscillator to obtain a signal of 20 dB below the Specified Output Level. (The Test Set will indicate -28 dB.)
4. Thread a record Test Tape on the unit.
5. Place the MONITOR switch in the TAPE position.
6. While recording adjust the azimuth screw for maximum indication on the Test Set.

Fine Adjustment:

NOTE: It is absolutely essential to accomplish the coarse adjustment before performing the fine adjustment to avoid phase error larger than 45°.

7. Connect the test equipment as shown in Fig.11-1.
8. Apply a 10 kHz signal at -28 dB to the LINE IN jacks and record this signal.
9. Carefully adjust the azimuth screw until the oscilloscope shows the signal to be in phase.
10. Secure the screw with a drop of Locking paint.

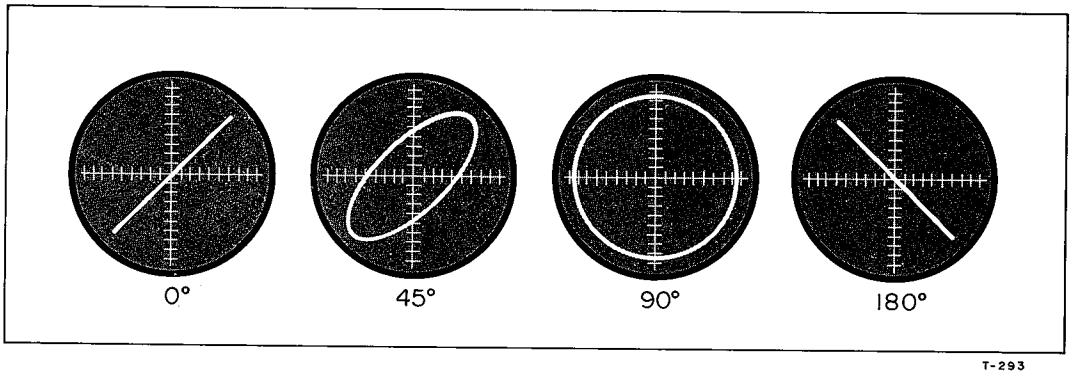


Fig. 11-6 Phase shift

Refer to Fig. 11-1 Fine Adjustment Set-up (playback)

RECORD LEVEL SET

NOTE: The OUTPUT control must be at the specified output level position (-8 dB at OUTPUT jacks), and the LINE INPUT controls at the Specified Input Level Setting.

1. Apply a 400 Hz signal at -8 dB to the LINE IN jacks.
2. Thread a record Test Tape TEAC YTT-8013 on the unit, then set BIAS switch to #1 position, Tape SPEED at HIGH.
3. Place the MONITOR switch in the TAPE position, LINE and OUTPUT Controls to Specified Level position.
4. Adjust VR-303/306 for a -8 dB signal at OUTPUT jacks.

OVERALL FREQUENCY RESPONSE

RECORD BIAS switch to the #1 position

1. Thread a blank TEAC YTT-8013 tape on the unit.
   Place BIAS switch at #1 position (EQ SW at 1),tape SPEED at HIGH.
2. Apply a signal stepped from 30 Hz to 26 kHz at -28 dB to LINE IN jacks and record it on the Test Tape.
3. Adjust L-301/303 for best response.
4. Repeat overall response check at LOW.

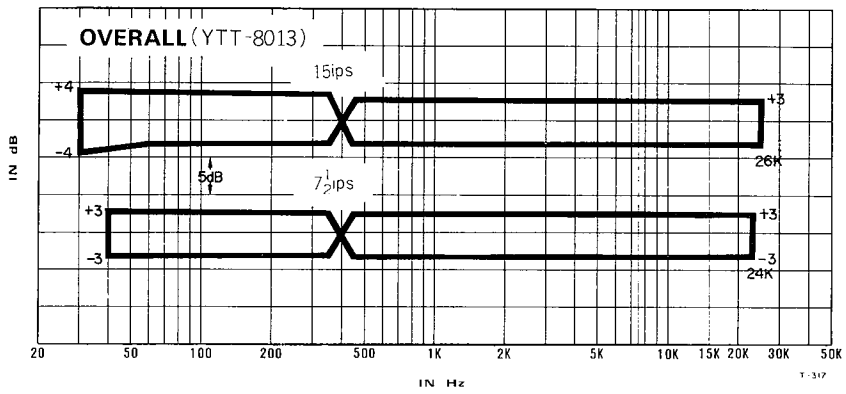


Fig. 11-7 Frequency Response Limits
-RECORD-

RECORD BIAS switch to the #2 position

5. Thread a blank TEAC YTT-8003 tape on the unit, place BIAS switch at #2 position (EQ SW at 1),tape SPEED switch at LOW.
6. Apply a signal stepped from 40 Hz to 22 kHz at -28 dB to LINE IN jacks.
7. If further adjustment is required, adjust VR-401 for best response.
8. Repeat overall response check at both speeds.

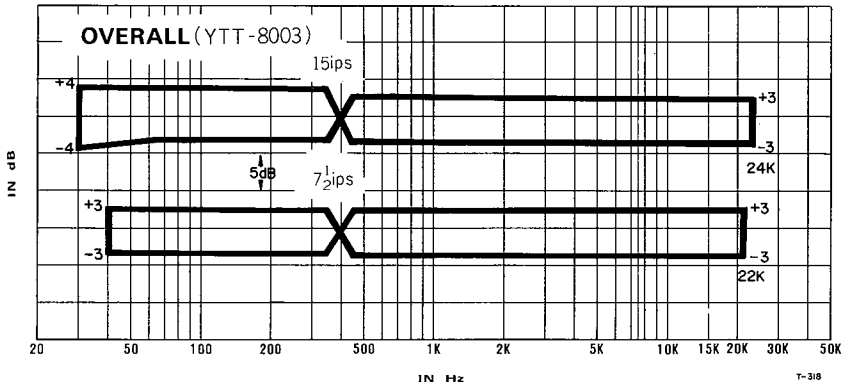


Fig. 11-8 Frequency Response Limits
-RECORD-

OPTIMUM ERASURE MEASUREMENT

NOTE: To measure erase efficiency, a 1 kHz Band Pass Filter (TEAC M-206A filter) must be used.

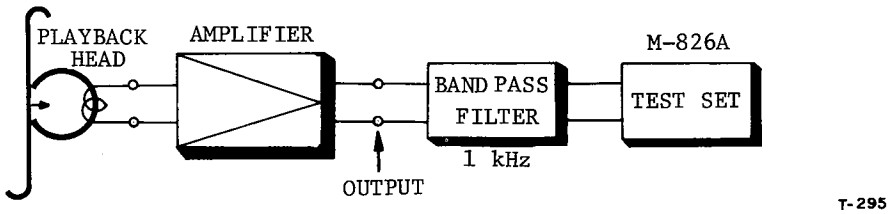


Fig. 11-9 Erasure efficiency check Set-up

Following is the measurement procedure at 15 ips using the TEAC reference tape, Type YTT-8013:

1. Apply a 1 KHz signal at 10dB above the operating level of -8dB, to the left channel LINE IN jack.
2. Make a 30 second recording of the above signal and rewind to beginning of this recording. Measure OUTPUT level during recording.
3. Disconnect the 1 KHz signal source (A.F. oscillator) from the LINE IN jack.
4. Connect a TEAC Test Set (M-826A), or equivalent, to the left channel OUTPUT jack, through a 1 KHz Narrow Band Pass Filter (TEAC M-206).
5. Set the recorder output switch to "TAPE monitor".
6. Put recorder in the RECORD mode and "record" (erase) over this previous recording; then rewind to begining again.
7. Put recorder in play mode and monitor the left channel output on the Test Set meter.
8. Difference in output level, against the OUTPUT level in Step 2, should be more than -65 dB (2 track).
9. Repeat the same procedure on the right channel.

LEVEL VARIATION

1. Thread a reel of high output tape YTT-8013, and select HIGH (15ips) SPEED position.
2. Record a variety of frequencies, such as 400 Hz, 2 kHz, 5 kHz, 8 kHz, 10 kHz, etc., at the specified input setting with the RECORD BIAS switch #1 position. Record approximately 10 seconds of each frequency.
3. During playback the output level should not vary more than 0.5dB at 400 Hz, 1 dB at 5 KHz to 20 KHz.
4. With the unit at tape SPEED LOW (7-1/2 ips), the tolerances are the same as at HIGH (15ips). Repeat step 2,3 with tape SPEED selector in LOW position.

CHANNEL-TO-CHANNEL CROSS TALK REJECTION

Following is the measurement procedure 15 ips using the TEAC reference tape, Type YTT-8013:

1. Apply a 1 KHz signal at the operating level of -8dB, to the left channel LINE IN jack.
2. Install a short-circuiting plug to the right channel LINE IN jack.
3. Make a 30 second recording on both channels, then rewind to beginning of this recording.
4. Connect a TEAC Test Set (M-826A), or equivalent, to the right channel OUTPUT jack through a 1 KHz narrow Band Pass Filter (TEAC M-206).
5. Put recorder in PLAY mode and monitor the "no signal" right channel on the Test Set meter. The reading should be -45 dB min.

PEAK LEVEL INDICATOR ADJUSTMENT

1. Set METER switch to NORMAL, SPEED switch to HIGH. Adjust VR-307/308 so that the peak level indicator ignites by a 400 Hz/0.775V (0dB) signal (8dB higher than normal input level) and extinguishes at a 0.5dB lower signal.

   NOTE: Adjust one channel at a time while applying no signal to the other channel.
2. After above adjustment, set SPEED switch to LOW and check that it will ignites at an input level of 615mV (-2 dB).
3. Set METER switch to HIGH and check to see that the peak level indicator ignites at an input level of 1.09V (+3dB) with tape speed at HIGH, and also at an input level of 869mV (+1dB) with tape speed at LOW.

SIGNAL-TO-NOISE RATIO

PLAYBACK

IMPORTANT

OUTPUT controls should be at the Specified Output Level Settings. The signal-to-noise ratio must meet factory standards. The values given are obtained using an unweighted Test Set (M-826A), with the supply and take-up motors having voltage applied but not rotating.

1. Thread a blank YTT-8013 tape on the unit leaving the tape outside the capstan and pinch roller.
2. Hold the supply reel stationary and depress the play (▶) button.
3. The Test Set connected to the OUTPUT jacks should indicate -58 dB or less.
4. This corresponds to a signal-to-noise ratio of 50 dB (difference between residual noise -58 dB and specified output level -8 dB for 1% THD).

NOTE

Tape SPEED at LOW (7-1/2 ips) and playback head switch at 2 track position.

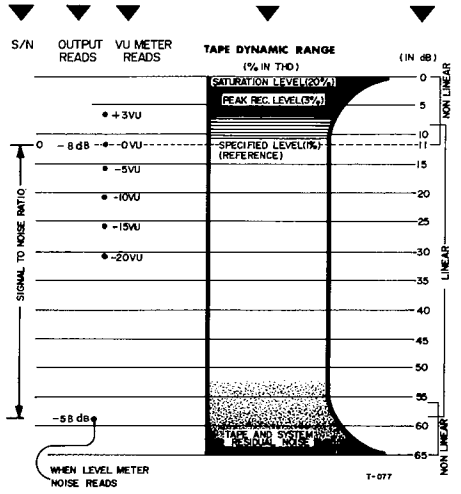


Fig. 11-10 Signal/Noise Computation

OVERALL

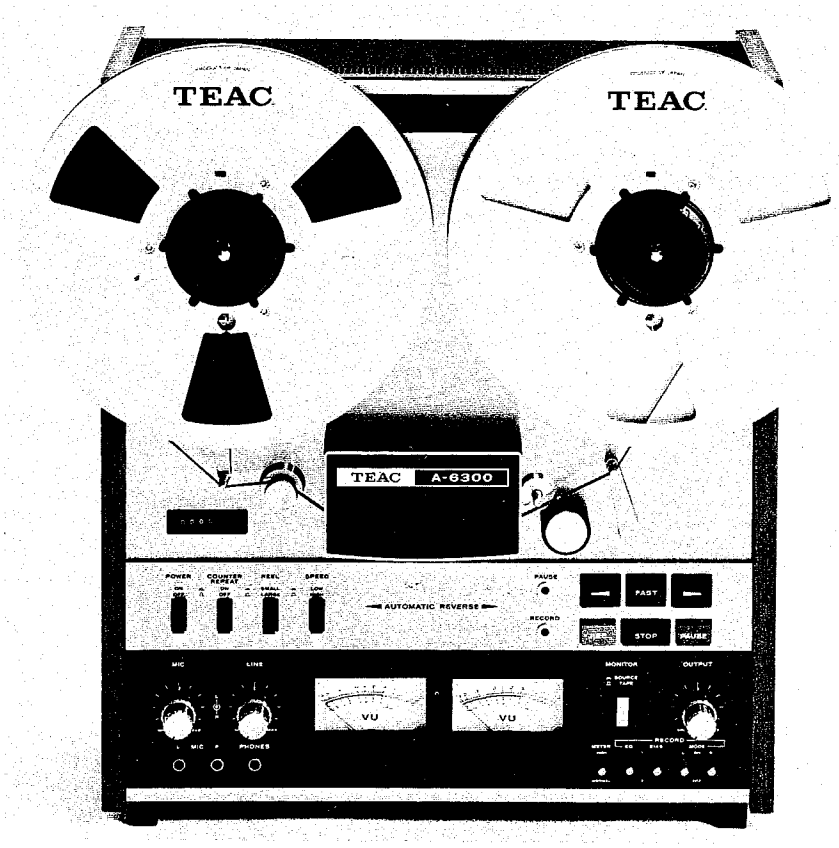
IMPORTANT: Clean and demagnetize the heads before proceeding. It is extremely important that all tests described in the preceding paragraphs have been completed and that all controls are left at their specified settings.

1. Thread a blank Test Tape YTT-8013 on the unit.
2. Remove the AF oscillator from the LINE IN jacks.
3. Place the unit in the RECORD mode with "no signal" applied. Note the point on the index counter where recording begins.
4. Rewind the tape to the beginning point and play it back.
5. The noise level as indicated on the Test Set should be -56 dB or less. NOTE: Tape SPEED at LOW.

NOTE: Bias, erase and playback amplifier noise are all included in this measurement. All frequencies between 20 Hz and 26 kHz are measured unweighted.

A-6300

4 TRACK STEREO TAPE DECK



For mechanical checks and adjustments, refer to the A-6100 section. Electrical adjustments are substantially different, so the following section applies only to the A-6300.

12. ELECTRICAL ADJUSTMENT

GENERAL NOTICE

* Before performing maintenance on this unit, thoroughly clean and demagnetize the entire tape path. TEAC maintenance equipment to be used:

  TEAC TZ-261 A/B for cleaning
  TEAC E-3 for demagnetizing

* The unit must be matched to the voltage and frequency of your locality.
* TEAC specified standard Test Tapes and test equipment must be used when performing maintenance to insure reliable results.
* Procedures for checks and adjustments, unless otherwise indicated, are for the left channel at a tape speed of 7-1/2 ips (19 cm). The same procedures are to be applied to the right channel and again for both channels at 3-3/4 ips (9.5 cm).
* Power supply check and adjustment:
  Check the voltage at VR-1 and adjust to +24V DC if required. (Refer to Control Board drawing on the TAPE TRANSPORT CIRCUIT DIAGRAM.)
* All amplifier checks and adjustments can be made from the bottom of the deck with the cover removed.

ADJUSTMENT LOCATIONS

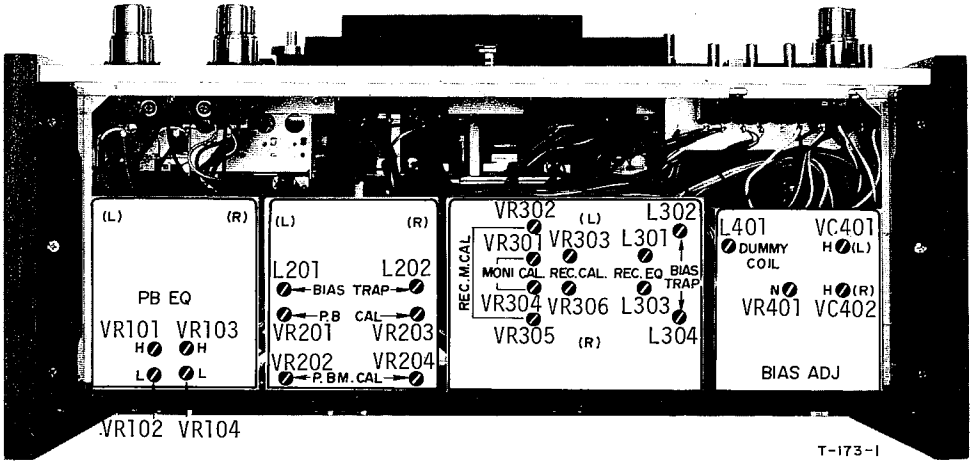
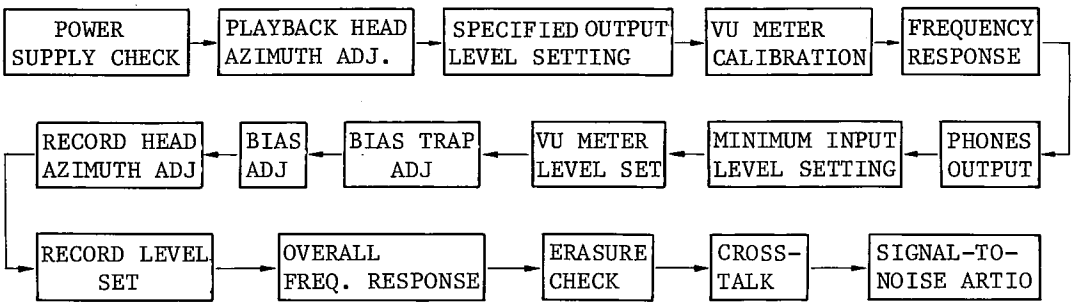


Fig. 12-1 Adjustment Locations
-Electrical-

13. MEASUREMENT AND ADJUSTMENT
-ELECTRICAL-

ADJUSTMENT SEQUENCE



POWER SUPPLY CHECK AND ADJUSTMENT

1. Place the power switch to the ON position.
2. Connect a VTVM across C-5.
3. Check the voltage at VR-1 and adjust for +24V DC.

PLAYBACK HEAD AZIMUTH ADJUSTMENT

NOTE: After head replacement or if, during playback, a slight pressure on the tape against the heads results in a higher indication at the Test-Set (M-826A), head azimuth should be readjusted.

Coarse Adjustment:

1. Connect a Test-Set to either OUTPUT jack; remove the head Housing.
2. Thread a TEAC Test Tape YTT-1003 on the unit.
   Play the 15 KHz Test Tone in Section 2 of the Test Tape.
3. Slowly rotate the azimuth screw until maximum indication is obtained on the Test-Set.
4. Repeat the procedure in Reverse play mode for the Reverse play head.

Fine Adjustment:

NOTE: It is absolutely essential to accomplish the coarse adjustment before performing the fine adjustment to avoid phase errors larger than 45°. After coarse adjustment, do not make large corrections, turn azimuth screw 1/4 turn or less.

5. Connect the test equipment as shown in Fig.11-1.
6. Play a 50 Hz∿10 kHz signal and adjust the azimuth screw until the oscilloscope shows that the signals are less than 45° out of phase (Forward and Reverse modes).
7. Secure the screw with a drop of Locking Paint.

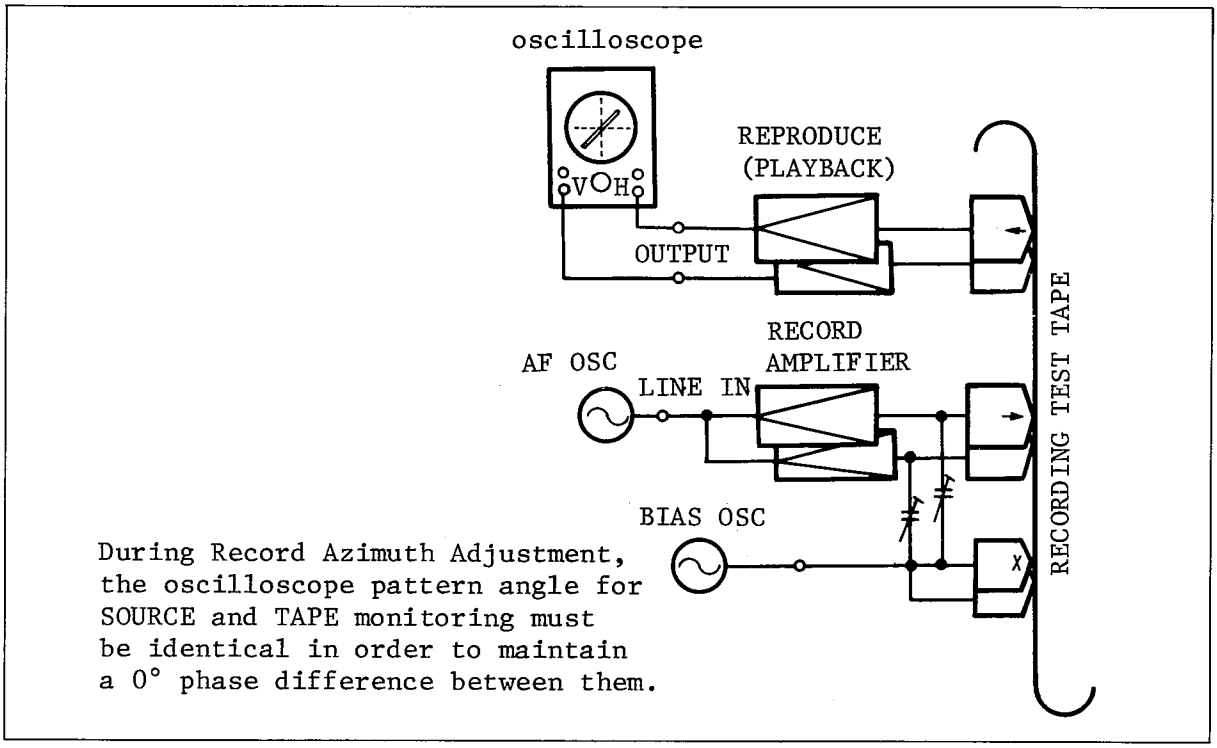


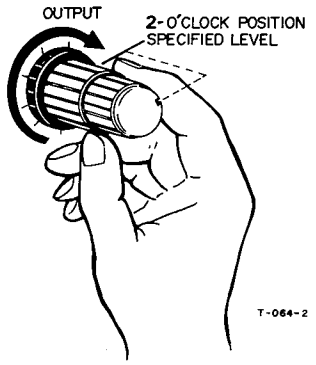
Fig.13-1 Fine Adjustment Set-up
-Head Alignment-

SPECIFIED OUTPUT LEVEL SETTING

NOTE: Connect a 10kΩ load to the OUTPUT jacks for all audio measurements when not using TEAC Test Set (M-826A).

1. Place the MONITOR switch to the TAPE position.
2. Turn the OUTPUT control fully clockwise (MAX).
3. Thread TEAC Test Tape YTT-1003 on the unit. Operate at HIGH speed.
4. Play the 400 Hz signal in section 1 of the Test Tape. This tone is recorded at the operating reference level (1% THD level).
5. Adjust VR-201/203 to obtain an output of -2 dB at the OUTPUT jacks.
6. Align the reference marks on the controls so that they are at the 2 o'clock position. This will give approximately -8 dB at the OUTPUT jacks.
7. Readjust VR-201/203 for a -8 dB level at OUTPUT jacks.

IMPORTANT: This is the specified output level setting. Do not disturb this setting until the remaining adjustments have been completed. Mark with "Memory Marker".



VU METER CALIBRATION

1. Place METER switch in NORMAL position.
2. Play the 400 Hz tone (1% THD) in Section 1 of the Test Tape.
3. With MONITOR switch at TAPE position, adjust VR-202/204 for a reading of 0 VU on the lower scale of the VU meter.

FREQUENCY RESPONSE

1. Place Tape SPEED switch in LOW position.
2. Thread a TEAC Test Tape YTT-1002 on the unit.
3. Compare the readings obtained on the Test Set with the response limits given in Fig. 11-2.
4. If adjustment is required, adjust VR-101/103 for Equalization at 3-3/4 ips (9.5 cm) speed.
5. Place Tape SPEED switch in HIGH position.
6. Thread a TEAC Test Tape YTT-1003 on the unit.
7. Repeat step 3. Check for best frequency response.
8. If adjustment is required, adjust VR-102/104 for Equalization at 7-1/2 ips (19 cm) speed.
9. Repeat all the above for the Reverse play mode. Performance should be identical or within specifications.

NOTE

If the frequency response does not meet specified response limits especially at the high end, the specified head should be carefully recleaned. If frequency response is still out of specifications, head azimuth must be re-adjusted.

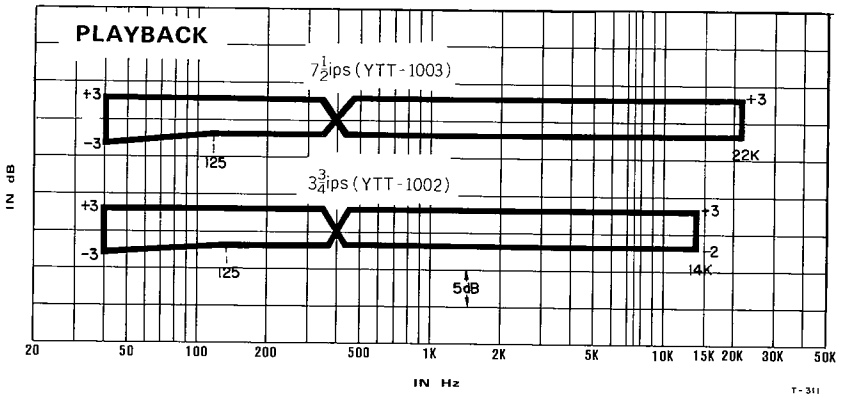


Fig. 13-2 Frequency Response Limits
-PLAYBACK-

DIFFERENCE LEVEL (Between Channels)

10. With a Test-Set connected to the OUTPUT jacks and using TEAC Test Tape, the readings listed below should be obtained at the specified frequency and tape speeds.

0.5 dB or less at 400 Hz signal
3 dB or less at 40 Hz-22 KHz (HIGH speed)
40 Hz-14 KHz (LOW speed)
and with in 4 dB for reverse play

PHONE OUTPUT CHECK

1. Place OUTPUT controls at the Specified Level Setting with a reference input 400 Hz signal at -8 dB.
2. Connect an 8Ω non-inductive resistor across the headphone output (PHONES). Connect Test Set across the resistor.
3. Test Set should indicate -24 dB ±2 dB.

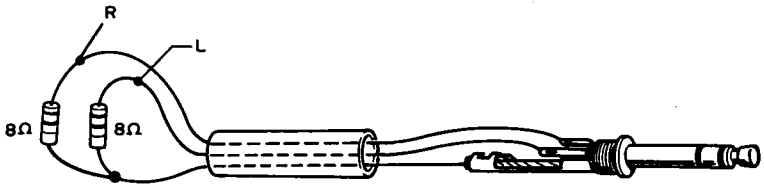


Fig. 13-3 Headphone Load Resistors

MINIMUM INPUT LEVEL SETTING

LINE Input:

1. Connect an AF oscillator to the LINE IN jacks.
2. Place MONITOR switch in SOURCE; EQ switch and BIAS switch in #1 position; RECORD MODE switches in ON position.
3. Apply a 400 Hz signal at -18 dB to the LINE IN jacks.
4. Turn LINE input controls fully clockwise, adjust VR-301/304 to obtain the specified output level of -8 dB at OUTPUT jacks.

MIC Input:
[This is a check only. No adjustments are to be made.]

5. After adjusting VR-301/304, apply a 400 Hz signal at -70 dB to the MIC IN jacks.
6. Rotate the MIC controls fully clockwise. This should give an output of -8 dB (specified output level) at OUTPUT jacks.

NOTE: Return MIC controls fully counterclockwise (CCW) to prevent noise insertion during the following steps.

VU METER LEVEL SET

Verify OUTPUT Controls to be at the Specified output level.

1. Place the MONITOR switch to the SOURCE position. METER switch in NORMAL.
2. Apply a 400 Hz signal at -8 dB to LINE IN jacks.
3. Adjust VR-302/305 for 0 VU (±0.5) on the VU meter.

BIAS TRAP ADJUSTMENT

The following check and adjustments must be performed with the EQ switch in the #1 position.

1. Place BIAS switch in #1 position, MONITOR switch in TAPE position, and RECORD MODE switch to "ON". Depress REC and PAUSE buttons.
2. Connect a VTVM or oscilloscope to the junction of C-314/L-302 (Left channel), C-329/L-304 (Right channel).
3. Adjust L-302, L-304 for minimum reading.

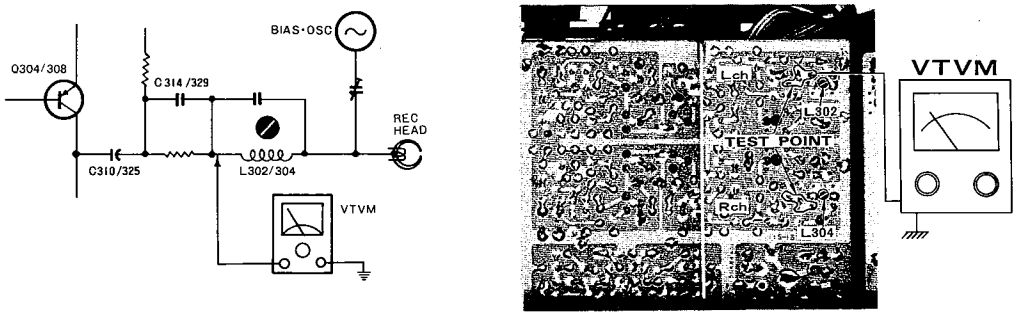


Fig. 13-4 Bias trap check point and adjustment locations

BIAS ADJUSTMENT

NOTE: Adjust bias traps (above) before proceeding. The following adjustments are made only at 3-3/4ips (9.5cm) tape speed. The bias oscillator frequency is 100 kHz (±5 kHz).

RECORD BIAS switch #1 position

1. Thread record Test Tape YTT-8013 on the unit.
2. Place the REC BIAS switch to #1 and place the unit in the record mode.
3. Place the MONITOR switch in the TAPE position.
4. Apply a 7 KHz signal at -18dB to the LINE IN jack.
5. While recording, adjust capacitor VC-401/402 for peak recording on the Test Set. From the peak, turn the capacitors clockwise until a decrease of 3 dB ± 0.5 dB is obtained (N.B. This will be slight overbias setting as is usually preferred).

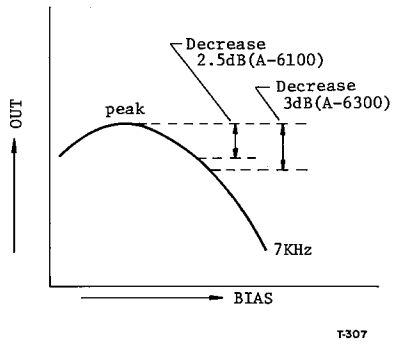


Fig. 13-5 Bias limits chart

RECORD HEAD AZIMUTH ADJUSTMENT

Coarse Adjustment:

NOTE: The effect of turning the azimuth screw will not immediately register on the Test Set. A slight delay will be noticed. Therefore, the screw must be rotated slightly with a pause to see the effect.

1. Connect a Test Set to the OUTPUT jack and an AF oscillator to the LINE IN jack, then set the AF oscillator to 10 kHz.
2. Make certain that the LINE controls are at the Specified Input Level positions.
3. Place the MONITOR switch to SOURCE and adjust the AF oscillator to obtain a signal of 20 dB below the Specified Output Level. (The Test Set will indicate -28 dB.)
4. Thread a record Test Tape on the unit.
5. Place the MONITOR switch in the TAPE position.
6. While recording adjust the azimuth screw for maximum indication on the Test Set.

Fine Adjustment:

NOTE: It is absolutely essential to accomplish the coarse adjustment before performing the fine adjustment to avoid phase error larger than 45°.

7. Connect the test equipment as shown in Fig. 13-1.
8. Apply a 10 kHz signal at -28 dB to the LINE IN jacks and record this signal.
9. Carefully adjust the azimuth screw until the oscilloscope shows the signal to be in phase.
10. Secure the screw with a drop of Locking paint.

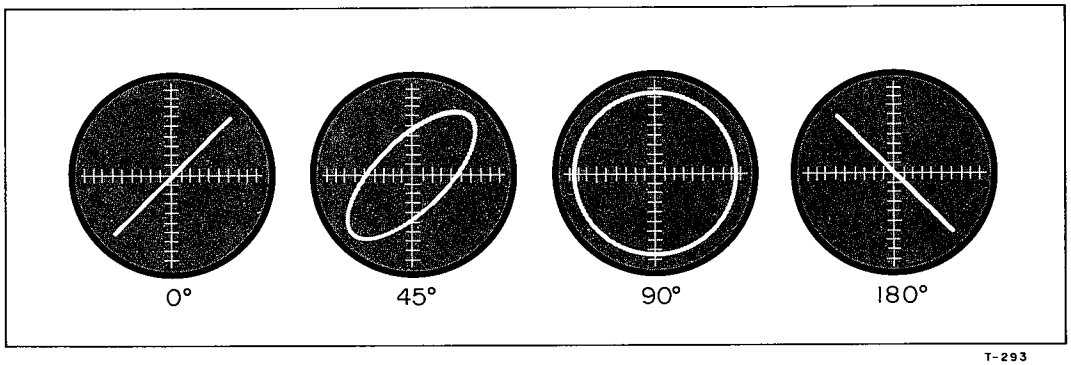


Fig. 13-6 Phase shift

Refer to Fig. 13-1 Fine Adjustment Set-up (playback)

RECORD LEVEL SET

NOTE: The OUTPUT control must be at the specified output level position (-8 dB at OUTPUT jacks), and the LINE INPUT controls at the Specified Input Level Setting.

1. Apply a 400 Hz signal at -8 dB to the LINE IN jacks.
2. Thread a record Test Tape TEAC YTT-8013 on the unit, then set BIAS switch to #1 position, Tape SPEED at HIGH.
3. Place the MONITOR switch in the TAPE position, LINE and OUTPUT Controls to Specified Level position.
4. Adjust VR-303/306 for a -8 dB signal at OUTPUT jacks.

OVERALL FREQUENCY RESPONSE

RECORD BIAS switch to the #1 position

1. Thread a blank TEAC YTT-8013 tape on the unit.
   Place BIAS switch at #1 position (EQ SW at 1),tape SPEED at HIGH.
2. Apply a signal stepped from 40 Hz to 24 KHz at -28 dB to LINE IN jacks and record it on the Test Tape.
3. Adjust L-301/303 for best response.
4. Repeat overall response check at LOW speed.

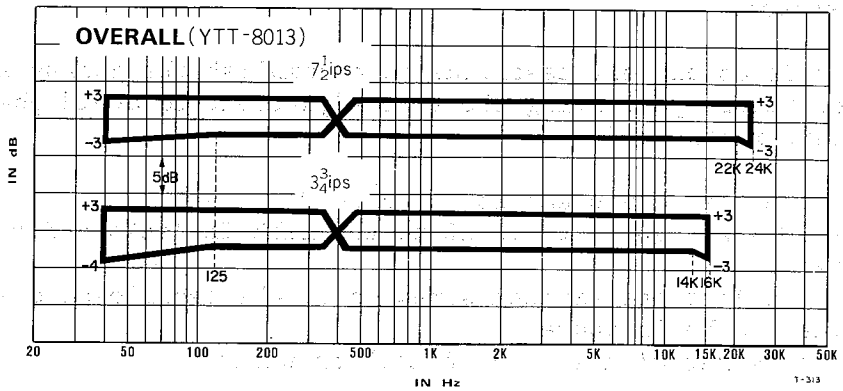


Fig.13-7 Frequency Response Limits
- RECORD -

RECORD BIAS switch to the #2 position

5. Thread a blank TEAC YTT-8003 tape on the unit, place BIAS switch at #2 position (EQ SW at 1),tape SPEED switch at LOW.
6. Apply a signal stepped from 40 Hz to 22 KHz at -28 dB to LINE IN jacks.
7. If further adjustment is required, adjust VR-401 for best response.
8. Repeat overall response check at both speeds.

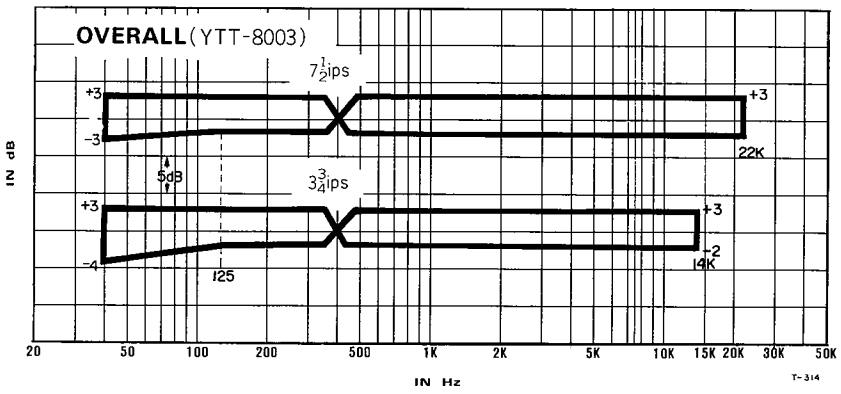


Fig. 13-8 Frequency Response limits
- RECORD -

OPTIMUM ERASURE MEASUREMENT

NOTE: To measure erase efficiency, a 1 kHz Band Pass Filter (TEAC M-206A filter) must be used.

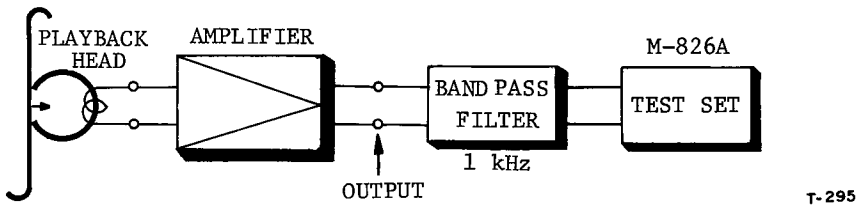


Fig. 13-9 Erasure Efficiency check Set-up

Following is the measurement procedure at 7-1/2 ips using the TEAC reference tape, Type YTT-8013:

1. Apply a 1 KHz signal at 10dB above the operating level of -8dB, to the left channel LINE IN jack.
2. Make a 30 second recording of the above signal and rewind to beginning of this recording.
3. Disconnect the 1 KHz signal source (A.F. oscillator) from the LINE IN jack.
4. Connect a TEAC Test Set (M-826A), or equivalent, to the left channel OUTPUT jack, through a 1 KHz Narrow Band Pass Filter (TEAC M-206).
5. Set the recorder output switch to "TAPE monitor".
6. Put recorder in the RECORD mode and "record" (erase) over this previous recording; then rewind to begining again.
7. Put recorder in play mode and monitor the left channel output on the Test Set meter.
8. Difference in output level, compared to the original output level, should be more than -68 dB.
9. Repeat the same procedure on the right channel.

LEVEL VARIATION

1. Thread a reel of high output tape YTT-8013, and select HIGH (7-1/2 ips) SPEED position.
2. Record a variety of frequencies, such as 400 Hz, 2 kHz, 5 kHz, 8 kHz, 10 kHz, etc., at the specified input setting with the RECORD BIAS switch #1 position. Record approximately 10 seconds of each frequency.
3. During playback the output level should not vary more than 0.5dB at 400 Hz, 1 dB at 5 KHz to 19 KHz.
4. With the unit at tape SPEED LOW (3-3/4 ips), the tolerances are the same as at HIGH (7-1/2 ips). Repeat step 2,3 with tape SPEED selector in LOW position.

CHANNEL-TO-CHANNEL CROSS TALK REJECTION

Following is the measurement procedure at 7-1/2 ips using the TEAC reference tape, Type YTT-8013:

1. Apply a 1 KHz signal at the operating level of -8dB, to the left channel LINE IN jack.
2. Install a short-circuiting plug to the right channel LINE IN jack.
3. Make a 30 second recording on both channels, then rewind to beginning of this recording.
4. Connect a TEAC Test Set (M-826A), or equivalent, to the right channel OUTPUT jack through a 1 KHz narrow Band Pass Filter (TEAC M-206).
5. Put recorder in PLAY mode and monitor the "no signal" right channel on the Test Set meter. The reading should be -50 dB or more.

TRACK-TO-TRACK CROSS TALK REJECTION

1. Thread the YTT-8013 tape on unit.
2. Apply a 125 KHz signal at -8dB to the right and left channel LINE IN jack.
3. Make a 30 second recording of the 125 Hz signal. Measure OUTPUT of both channels.
4. Stop the unit and remove 125 Hz signal input.
5. Connect TEAC Test Set (M-826A) to the right and left channel OUTPUT jack.
6. Reverse playback the recorded signal portion of tape and monitor the level on the Test Set meter.
7. The reading should be -40 dB or more compared to readings taken during forward record mode in step 3.

NOTE

The Band Pass Filter used in previous measurement is not required for this measurement.

SIGNAL-TO-NOISE RATIO

PLAYBACK

IMPORTANT

OUTPUT controls should be at the Specified Output Level Settings. The signal-to-noise ratio must meet factory standards. The values given are obtained using an unweighted Test Set (M-826A), with the supply and take-up motors having voltage applied but not rotating.

1. Thread a blank YTT-8013 tape on the unit leaving the tape outside the capstan and pinch roller.
2. Hold the supply reel stationary and depress the play (▶) button.
3. The Test Set connected to the OUTPUT jacks should indicate -56 dB or less.
4. This corresponds to a signal-to-noise ratio of 48 dB (difference between residual noise -56 dB and specified output level -8 dB for 1% THD).

NOTE: Tape SPEED at LOW (3-3/4 ips)

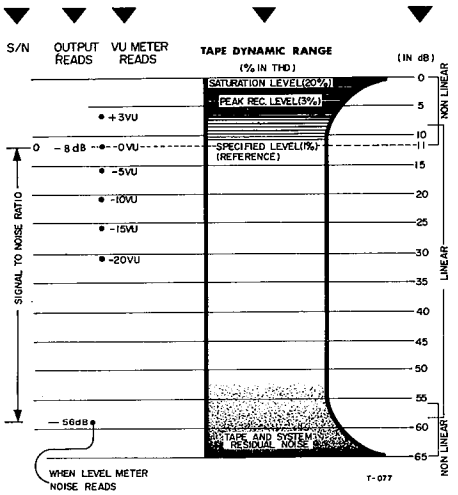


Fig. 13-10 Signal/Noise Computation

OVERALL

IMPORTANT: Clean and demagnetize the heads before proceeding. It is extremely important that all tests described in the preceding paragraphs have been completed and that all controls are left at their specified settings.

1. Thread a blank Test Tape YTT-8013 on the unit.
2. Remove the AF oscillator from the LINE IN jacks.
3. Place the unit in the RECORD mode with "no signal" applied. Note the point on the index counter where recording begins.
4. Rewind the tape to the beginning point and play it back.
5. The noise level as indicated on the Test Set should be -56 dB or less. NOTE: Tape SPEED at LOW (3-3/4 ips)

NOTE: Bias, erase and playback amplifier noise are all included in this measurement. All frequencies between 40 Hz and 15 kHz are measured unweighted.

14. SERVICING AND MAINTENANCE

1. Power supply:

   Make sure that the power supply is stable at the rated voltage. Fluctuations will result in uneven tape speed, and wow and flutter in the recorded signal.

2. Cleaning the heads:

   TEAC TZ-261A for Head cleaning, TZ-261B for Rubber cleaning must be used.

3. Demagnetization of the head:

   If the record or playback head becomes magnetized, noise will increase and fidelity will deteriorate. For this reason, it is advisable to use brass or other such non-magnetic tools when working near the heads.
   Similarly, the use of a tester or vacuum tube ohm-meter should be avoided in checking the heads, as these instruments operate by applying a DC current, and will thus induce magnetism. If the heads have had any contact with DC currents or magnetic tools, demagnetize the heads with a TEAC Model E-3 Head Demagnetizer.

4. Lubrication:

   Under normal operating conditions, lubrication is required only once each year. Before lubricating, clean the drive belt and drive pulleys. Operate the deck for 30 minutes to 1 hour immediately prior to oiling. After oiling, keep the deck in the upright position for 3 to 4 hours to allow thorough absorption of the oil.

   Approximately once each year or after 2000 hours of use, apply TEAC TZ-255 Lubricating Oil to the following places only;

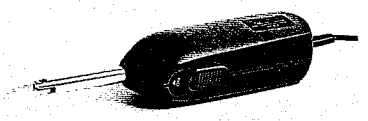
   Pinch roller shaft bearings •••• 1 drop
   Capstan shaft bearing ••••••••••• 2 drops
   * Remove the dust cap and washer for access to the felt
   Capstan motor •••••• 0.5 cc maximum to each oiling tube

NOTE:	Apply 3 or 4 drops at a time through the oiling tubes. The oil level can be seen to drop as the felt material in the motor bearings absorb oil. When the level ceases to drop, no more oil is needed. Do not attempt to force oil into the motors nor exceed the maximum.
WARNING:	Excessive oiling will scatter oil inside the deck. This oil will cause drive belt slippage and other difficulties. Check for slippage and clean all parts inside the deck before operating after lubrication. Check for oil emission after operation before returning deck to the customer.

TEAC MAINTENANCE EQUIPMENT

TEAC TZ-261
Cleaner

TEAC TZ-255
Oil Kit

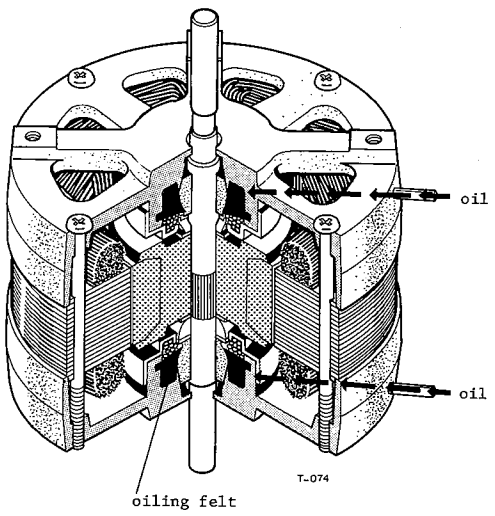


TEAC E-3
Head Demagnetizer

Fig. 14-1 TEAC Maintenance Equipment

LUBRICATION

Capstan motor



Capstan shaft

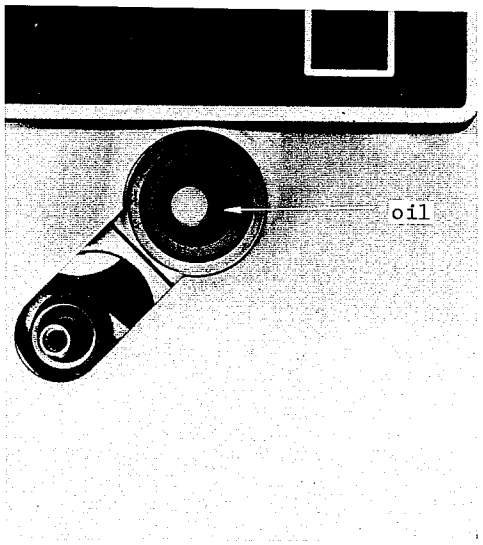


Fig. 14-2 Motor Construction and oiling points

15. LIST OF LINE VOLTAGE AND CYCLE (Hz) USED AROUND THE WORLD

Name of the country	Cycle (Hz)	Voltage	Name of the country	Cycle (Hz)	Voltage
Argentina	50	220	Guatemala	60	120,(220)
Algeria	50	127,220	Germany	50	110,120,127,220
Austria	50	230,240	Hungary	50	220
Australia	50	220	Honduras	60	110
Brazil	50/60	110,115,125,227, 220	Haiti	(50)/60	115,(220)
			Iran	50	220
Belgium	50	110,127,220	Iraq	50	220
Burma	50	230	India	50	230
Canada	60	110,115,120	Indonesia	50	110,117
Cuba	60	110	Israel	50	230
Costa Rica	60	120	Italy	50	110,(120),(127) (150),(160),220
Colombia	60	110,(115),(120)			
Chile	50/(60)	(110),220	Jamaica	50	110
Czechoslovakia	50	220	Japan	50/60	100
Denmark	50	220	Korea	60	100
Dominica	60	110	Kenya	50	240
England	50	(200),(210),(230), 240	Lebanon	50	110,220
			Luxembourg	50	110,220
Ecuador	60	(110),120,127	Malaya	50	230
El Salvador	60	110	Mexico	50/60	120,127
Egypt	50	110,220	Monaco	50	220
Formosa	60	110	Morocco	50	115,127,220
Finland	50	220	Netherland	50	127,220
France	50	110,(115),(120), (127),220	Nigeria	50	230
			Nicaragua	60	120

Name of the country	Cycle (Hz)	Voltage
New Zealand	50	230
Norway	50	220
Okinawa	60	100
Pakistan	50	220,230
Panama	60	110,(115),(120)
Philippines	60	110,(220)
Peru	(50)/60	(110),200
Portugal	50	120,220
Poland	50	220
China	50/60	110,220
Rep.of Vietnam	50	120,127
Rumania	50	(110),220
Saudi Arabia	50/60	120,230
Sierra Leone	50	230
Syria	50	115,200
Switzerland	50	220
Sweden	50	(117),220
Spain	50	120,127
Soviet Union	50	127
Thailand	50	220
Tunisia	50	110,115,220
Turkey	50	110,220
U.S.A.	60	115,120
Uruguay	50	220
Venezuela	(50)/60	120
Yugoslavia	50	220

16. TEAC DECIBEL TABLE

1	.774	0 db	1	.774	0 db	1	.774	0db	1	.774	0 db	1	.774	0 db	1	.774	0 db	1	.774	0 db	1	179.	126.	89.4	63.2
																			600Ω			32Ω	16Ω	8Ω	4Ω
.944	.730	120.5	9.44	7.30	100.5	94.4	73.0	80.5	944	730	60.5	9.44	7.30	40.5	94.4	73.0	20.5	.944	.730	0.5	.891	169	119	83.9	59.6
.891	.690	121	8.91	6.90	101	89.1	69.0	81	891	690	61	8.91	6.90	41	89.1	69.0	21	.891	.690	1	.794	159	112	79.3	56.3
.841	.651	121.5	8.41	6.51	101.5	84.1	65.1	81.5	841	651	61.5	8.41	6.51	41.5	84.1	65.1	21.5	.841	.651	1.5	.708	150	106	74.9	53.1
.794	.615	122	7.94	6.15	102	79.4	61.5	82	794	615	62	7.94	6.15	42	79.4	61.5	22	.794	.615	2	.631	142	100	70.7	50.2
.750	.580	122.5	7.50	5.80	102.5	75.0	58.0	82.5	750	580	62.5	7.50	5.80	42.5	75.0	58.0	22.5	.750	.580	2.5	.562	134	94.5	66.7	47.3
.707	.548	123	7.07	5.48	103	70.7	54.8	83	707	548	63	7.07	5.48	43	70.7	54.8	23	.707	.548	3	.501	126	89.3	63.0	44.7
.668	.517	123.5	6.68	5.17	103.5	66.8	51.7	83.5	668	517	63.5	6.68	5.17	43.5	66.8	51.7	23.5	.668	.517	3.5	.447	119	84.3	59.4	42.2
.630	.488	124	6.30	4.88	104	63.0	48.8	84	630	488	64	6.30	4.88	44	63.0	48.8	24	.530	.488	4	.398	113	79.5	56.1	39.8
.596	.461	124.5	5.96	4.61	104.5	59.6	46.1	84.5	596	461	64.5	5.96	4.61	44.5	59.6	46.1	24.5	.596	.461	4.5	.355	106	75.1	53.0	37.6
.562	.435	125	5.62	4.35	105	56.2	43.5	85	562	435	65	5.62	4.35	45	56.2	43.5	25	.562	.435	5	.316	100	70.9	50.0	35.5
.531	.411	125.5	5.31	4.11	105.5	53.1	41.1	85.5	531	411	65.5	5.31	4.11	45.5	53.1	41.1	25.5	.531	.411	5.5	.282	94.9	67.0	47.3	33.5
.501	.388	126	5.01	3.88	106	50.1	38.8	86	501	388	66	5.01	3.88	46	50.1	38.8	26	.501	.388	6	.251	89.6	63.2	44.6	31.7
.473	.366	126.5	4.73	3.66	106.5	47.3	36.6	86.5	473	366	66.5	4.73	3.66	46.5	47.3	36.6	26.5	.473	.366	6.5	.224	84.5	59.6	42.1	29.9
.446	.345	127	4.46	3.45	107	44.6	34.5	87	446	345	67	4.46	3.45	47	44.6	34.5	27	.446	.345	7	.199	79.7	56.2	39.7	28.1
.422	.326	127.5	4.22	3.26	107.5	42.2	32.6	87.5	422	326	67.5	4.22	3.26	47.5	42.2	32.6	27.5	.422	.326	7.5	.178	75.3	53.1	37.5	26.6
.398	.308	128	3.98	3.08	108	39.8	30.8	88	398	308	68	3.98	3.08	48	39.8	30.8	28	.398	.308	8	.158	71.1	50.2	35.4	25.1
.376	.290	128.5	3.76	2.90	108.5	37.6	29.0	88.5	376	290	68.5	3.76	2.90	48.5	37.6	29.0	28.5	.376	.290	8.5	.141	67.0	47.3	33.3	23.7
.354	.274	129	3.54	2.74	109	35.4	27.4	89	354	274	69	3.54	2.74	49	35.4	27.4	29	.354	.274	9	.125	63.3	44.7	31.5	22.3
.335	.259	129.5	3.35	2.59	109.5	33.5	25.9	89.5	335	259	69.5	3.35	2.59	49.5	33.5	25.9	29.5	.335	.259	9.5	.112	59.8	42.2	29.8	21.1
.316	.244	130	3.16	2.44	110	31.6	24.4	90	316	244	70	3.16	2.44	50	31.6	24.4	30	.316	.244	10	.100	56.4	39.8	28.1	19.9
.298	.232	130.5	2.98	2.32	110.5	29.8	23.2	90.5	298	232	70.5	2.98	2.32	50.5	29.8	23.2	30.5	.298	.232	10.5	.0891	53.6	37.0	26.7	18.9
.281	.218	131	2.81	2.18	111	28.1	21.8	91	281	218	71	2.81	2.18	51	28.1	21.8	31	.281	.218	11	.0794	50.3	35.5	25.1	17.8
.265	.205	131.5	2.65	2.05	111.5	26.5	20.5	91.5	265	205	71.5	2.65	2.05	51.5	26.5	20.5	31.5	.265	.205	11.5	.0708	47.3	33.4	23.6	16.7
.251	.194	132	2.51	1.94	112	25.1	19.4	92	251	194	72	2.51	1.94	52	25.1	19.4	32	.251	.194	12	.0631	44.8	31.6	22.3	15.8
.237	.183	132.5	2.37	1.83	112.5	23.7	18.3	92.5	237	183	72.5	2.37	1.83	52.5	23.7	18.3	32.5	.237	.183	12.5	.0562	42.3	29.8	21.0	14.9
.223	.173	133	2.23	1.73	113	22.3	17.3	93	223	173	73	2.23	1.73	53	22.3	17.3	33	.223	.173	13	.0501	40.0	28.2	19.9	14.1
.211	.163	133.5	2.11	1.63	113.5	21.1	16.3	93.5	211	163	73.5	2.11	1.63	53.5	21.1	16.3	33.5	.211	.163	13.5	.0447	37.6	26.6	18.7	13.3
.199	.154	134	1.99	1.54	114	19.9	15.4	94	199	154	74	1.99	1.54	54	19.9	15.4	34	.199	.154	14	.0398	35.6	25.1	17.7	12.6
.188	.145	134.5	1.88	1.45	114.5	18.8	14.5	94.5	188	145	74.5	1.88	1.45	54.5	18.8	14.5	34.5	.188	.145	14.5	.0355	33.5	23.6	16.7	11.8
.177	.137	135	1.77	1.37	115	17.7	13.7	95	177	137	75	1.77	1.37	55	17.7	13.7	35	.177	.137	15	.0316	31.6	22.3	15.7	11.2
.168	.130	135.5	1.68	1.30	115.5	16.8	13.0	95.5	168	130	75.5	1.68	1.30	55.5	16.8	13.0	35.5	.168	.130	15.5	.0282	30.0	21.2	14.9	10.6
.158	.122	136	1.58	1.22	116	15.8	12.2	96	158	122	76	1.58	1.22	56	15.8	12.2	36	.158	.122	16	.0251	28.2	19.9	14.0	9.55
.150	.116	136.5	1.50	1.16	116.5	15.0	11.6	96.5	150	116	76.5	1.50	1.16	56.5	15.0	11.6	36.5	.150	.116	16.5	.0224	26.8	18.9	13.3	9.46
.141	.109	137	1.41	1.09	117	14.1	10.9	97	141	109	77	1.41	1.09	57	14.1	10.9	37	.141	.109	17	.0199	25.2	17.8	12.5	8.89
.133	.103	137.5	1.33	1.03	117.5	13.3	10.3	97.5	133	103	77.5	1.33	1.03	57.5	13.3	10.3	37.5	.133	.103	17.5	.0178	23.8	16.8	11.8	8.40
.125	.097	138	1.25	.975	118	12.5	9.75	98	125	97.5	78	1.25	975	58	12.5	9.75	38	.125	.097	18	.0158	22.4	15.8	11.1	7.91
.119	.092	138.5	1.19	.921	118.5	11.9	9.21	98.5	119	92.1	78.5	1.19	921	58.5	11.9	9.21	38.5	.119	.092	18.5	.0141	21.2	15.0	10.6	7.51
.112	.086	139	1.12	.869	119	11.2	8.69	99	112	86.9	79	1.12	899	59	11.2	8.69	39	.112	.086	19	.0125	19.9	14.0	9.89	7.02
.106	.082	139.5	1.06	.820	119.5	10.6	8.20	99.5	106	82.0	79.5	1.06	820	59.5	10.6	8.20	39.5	.106	.082	19.5	.0112	18.9	13.4	9.43	6.69
.100	.077	140	1.00	.774	120	10.0	7.74	100	100	77.4	80	1.00	774	60	10.0	7.74	40	.100	.077	20	.0100	17.8	12.5	8.85	6.28
μV	μV	– db	μV	μV	– db	μV	μV	– db	μV	μV	– db	mV	mV	– db	mV	mV	– db	V	V	– db	POWER RATIO	mV	mV	mV	mV

Relationship between decibels, currents, voltage and power ratios.

Decibel (Voltage)	Loss	Gain	Decibel (Power)	Decibel (Voltage)	Loss	Gain	Decibel (Power)	Decibel (Voltage)	Loss	Gain	Decibel (Power)	Decibel Voltage)	Loss	Gain	Decibel (Power)	Decibel (Voltage)	Loss	Gain	Decibel (Power)
.0	1.0000	1.000	.0	4.0	.6310	1.555	2.00	8.0	.3981	2.512	4.00	12.0	.2512	3.981	6.00	16.0	.1585	6.310	8.00
.1	.9886	1.012	.05	.1	.6237	1.603	.05	.1	.3936	2.541	.05	.1	.2483	4.027	.05	.1	.1567	6.383	.05
.2	.9772	1.023	.10	.2	.6166	1.622	.10	.2	.3890	2.570	.10	.2	.2455	4.074	.10	.2	.1549	6.457	.10
.3	.9661	1.035	.15	.3	.6095	1.641	.15	.3	.3846	2.600	.15	.3	.2427	4.121	.15	.3	.1531	6.531	.15
.4	.9550	1.047	.20	.4	.6026	1.660	.20	.4	.3802	2.630	.20	.4	.2399	4.169	.20	.4	.1514	6.607	.20
.5	.9441	1.059	.25	.5	.5957	1.679	.25	.5	.3758	2.661	.25	.5	.2371	4.217	.25	.5	.1496	6.683	.25
.6	.9333	1.072	.30	.6	.5888	1.698	.30	.6	.3715	2.692	.30	.6	.2344	4.266	.30	.6	.1479	6.761	.30
.7	.9226	1.084	.35	.7	.5821	1.718	.35	.7	.3673	2.723	.35	.7	.2317	4.315	.35	.7	.1462	6.839	.35
.8	.9120	1.096	.40	.8	.5754	1.738	.40	.8	.3631	2.754	.40	.8	.2291	4.365	.40	.8	.1445	6.918	.40
.9	.9016	1.109	.45	.9	.5679	1 758	.45	.9	.3589	2.786	.45	.9	.2265	4.416	.45	.9	.1429	6.998	.45
1.0	.8913	1.122	.50	5.0	.5623	1.778	.50	9.0	.3541	2.817	.50	13.0	.2239	4.467	.50	17.0	.1413	7.070	.50
.1	.8810	1.135	.55	.1	.5559	1.799	.55	.1	.3508	2.851	.55	.1	.2213	4.519	.55	.1	.1396	7.161	.55
.2	.8710	1.148	.60	.2	.5495	1.820	.60	.2	.3467	2.884	.60	.2	.2188	4.571	.60	.2	.1380	7.244	.60
.3	.8610	1.161	.65	.3	.5433	1.841	.65	.3	.3428	2.917	.65	.3	.2163	4.624	.65	.3	.1365	7.328	.65
.4	.8511	1.175	.70	.4	.5370	1.862	.70	.4	.3388	2.951	.70	.4	.2138	4.677	.70	.4	.1349	7.413	.70
.5	.8414	1.189	.75	.5	.5309	1.884	.75	.5	.3350	2.985	.75	.5	.2113	4.732	.75	.5	.1334	7.499	.75
.6	.8318	1.202	.80	.6	.5248	1.905	.80	.6	.3311	3.020	.80	.6	.2089	4.786	.80	.6	.1318	7.586	.80
.7	.8222	1.216	.85	.7	.5188	1.928	.85	.7	.3273	3.055	.85	.7	.2045	4.842	.85	.7	.1303	7.674	.85
.8	.8128	1.230	.90	.8	.5129	1.960	.90	.8	.3236	3.090	.90	.8	.2042	4.898	.90	.8	.1288	7.762	.90
.9	.8035	1.245	.95	.9	.5070	1.972	.95	.9	.3199	3.126	.95	.9	.2018	4.955	.95	.9	.1274	7.852	.95
2.0	.7943	1.259	1.00	6.0	.5012	1.995	3.00	10.0	.3162	3.162	5.00	14.0	.1995	5.012	7.00	18.0	.1259	7.943	9.00
.1	.7852	1.274	.05	.1	.4955	2.018	.05	.1	.3126	3.199	.05	.1	.1972	5.070	.05	.1	.1245	8.035	.05
.2	.7762	1.288	.10	.2	.4898	2.042	.10	.2	.3090	3.236	.10	.2	.1950	5.129	.10	.2	.1230	8.128	.10
.3	.7684	1.303	.15	.3	.4842	2.065	.15	.3	.3055	3.273	.15	.3	.1928	5.188	.15	.3	.1216	8.222	.15
.4	.7586	1.316	.20	.4	.4785	2.089	.20	.4	.3020	3.311	.20	.4	.1905	5.248	.20	.4	.1202	8.318	.20
.5	.7499	1.334	.25	.5	.4732	2.113	.25	.5	.2985	3.350	.25	.5	.1884	5.309	.25	.5	.1189	8.414	.25
.6	.7413	1.349	.30	.6	.4677	2.138	.30	.6	.2951	3.388	.30	.6	.1862	5.370	.30	.6	.1175	8.511	.30
.7	.7328	1.365	.35	.7	.4624	2.163	.35	.7	.2917	3.428	.35	.7	.1841	5.433	.35	.7	.1161	8.610	.35
.8	.7244	1.380	.40	.8	.4571	2.188	.40	.8	.2884	3.467	.40	.8	.1820	5.495	.40	.8	.1148	8.710	.40
.9	.7161	1.396	.45	.9	.4519	2.213	.45	.9	.2851	3.508	.45	.9	.1799	5.559	.45	.9	.1135	8.811	.45
3.0	.7073	1.413	.50	7.0	.4467	2.239	.50	11.0	.2818	3.548	.50	15.0	.1778	5.623	.50	19.0	.1122	8.913	.50
.1	.6998	1.429	.55	.1	.4416	2.265	.55	.1	.2786	3.589	.55	.1	.1758	5.689	.55	.1	.1109	9.016	.55
.2	.6918	1.445	.60	.2	.4365	2.291	.60	.2	.2754	3.631	.60	.2	.1738	5.754	.60	.2	.1096	9.120	.60
.3	.6839	1.462	.65	.3	.4315	2.317	.65	.3	.2723	3.673	.65	.3	.1718	5.821	.65	.3	.1084	9.226	.65
.4	.6761	1.479	.70	.4	.4266	2.344	.70	.4	.2692	3.715	.70	.4	.1698	5.888	.70	.4	.1072	9.333	.70
.5	.6683	1.496	.75	.5	.4217	2.371	.75	.5	.2661	3.756	.75	.5	.1679	5.957	.75	.5	.1059	9.441	.75
.6	.6607	1.514	.80	.6	.4169	2.399	.80	.6	.2630	3.802	.80	.6	.1660	6.026	.80	.6	.1047	9.550	.80
.7	.6531	1.531	.85	.7	.4121	2.427	.85	.7	.2600	3.846	.85	.7	.1641	6.095	.85	.7	.1035	9.661	.85
.8	.6457	1.549	.90	.8	.4074	2.455	.90	.8	.2570	3.890	.90	.8	.1622	6.166	.90	.8	.1023	9.772	.90
.9	.6383	1.567	.95	.9	.4027	2.483	.95	.9	.2541	3.936	.95	.9	.1603	6.237	.95	.9	.1012	9.886	.95

Decibel (Voltage)	Loss	Gain	Decibel (Power)
20.0	.1000	10.00	10.00
	Use the same numbers as 0-20 Db., but ahift point one step to the left. Thus since 10 Db.=.3162 30 Db.=.03162	Use the same numbers as 0-20 Db., but shift point one step to the right. Thus since 10 Db.=3.162 30 Db.=31.62	This column repeats every 10 Db. instead of every 23 Db.

17-1. TROUBLESHOOTING

NOTE: The following guide lists specific difficulties that could occur in the A-6100/6300. Possible causes are listed for each malfunction. Visually inspect the unit for any damage such as broken or burned components or wiring, loose connections, etc.

MECHANICAL

MALFUNCTION	POSSIBLE SOURCE OF TROUBLE
* Fuse burns out (blows) when power applied	Faulty C6, D3 or D4 Defective Power transformer
* Capstan motor fails to rotate when Tension Arm is raised	SW2 or motor defective Drive belt off or slipping
* Transport inoperative in Forward Playback or Fast Forward	Remote Control dummy plug missing or loose Faulty F3 or associated parts
* Either reel motor inoperative in playback but OK in Fast Forward	Defective tap on wirewound Resistor Motor capacitor C-909/912 (A-6100) C-901/903 (A-6300) Associated circuit parts
* Both reel motors operate with high torque in Fast Forward mode	Defective CR16, CR17
* Excessive Crosstalk	Head alignment improper Faulty Relay (A-6300) Head selector sw (A-6100) in wrong position
* Counter Repeat operation faulty	Defective Counter SW-11 or K3, K7 (A-6300 only)
* Auto Reverse sensing inoperative	Faulty K6, Q5, Q6 or associated parts (A-6300 only)
* Reverse mode inoperative	Faulty K3, K5 or associated parts (A-6300 only)
* Wow-Flutter excessive (irregular tape movement)	Improper pinch roller pressure Oily or defective belt Back tension too high
* Pinch Roller fails to engage completely	Faulty solenoid Defective K4, D14, D18 (A-6100) K2 (A-6300) or associated parts

17-2. TROUBLESHOOTING

ELECTRICAL

MALFUNCTION	POSSIBLE SOURCE OF TROUBLE
* Amplifier inoperative	Defective Q1, Q2 or associated parts
* Playback audio intermittent or absent	
a) If SOURCE Monitor function normal	Play head plug loose or disconnected
	Q101, Q102, Q103 or associated parts
b) If SOURCE Monitor function inoperative	Grounding strap loose or disconnected from the power amplifier PC Board
	Faulty Q201, Q202 or the associated parts
* VU Meter inoperative in TAPE MONITOR mode (When normal in SOURCE)	Defective monitor switch Q203 or associated parts
* VU Meter inoperative in SOURCE MONITOR mode (When normal in TAPE)	Defective monitor switch Q309 or associated parts
* VU Meter inoperative in both modes	Faulty meter or wiring
* Will not record but RECORD Indicator lamp illuminates	
a) No erase action	Faulty Q401, Q402 or associated parts
b) VU Meter SOURCE MONITOR function normal	Dirty Record head
	Defective Q301 or associated parts
* Will not record and RECORD Indicator lamp does not illuminate	RECORD-MODE switch
	Faulty K401

NOTE: Reference numbers given for the Amplifier section are Left channel designations. Refer to the schematic diagrams Right channel reference numbers.

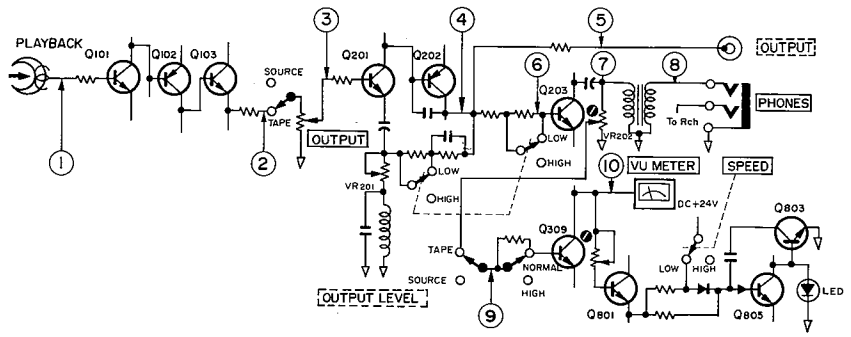
Prefix letters indicate:

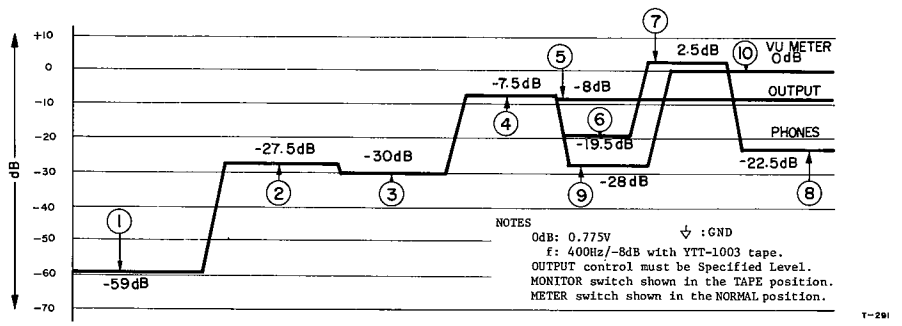
C:	Capacitor	F:	Fuse
Q:	Transistor	D:	Diode
K:	Relay	CR:	Spark Killer(Cap.)
		SW:	Switch

18. LEVEL DIAGRAMS

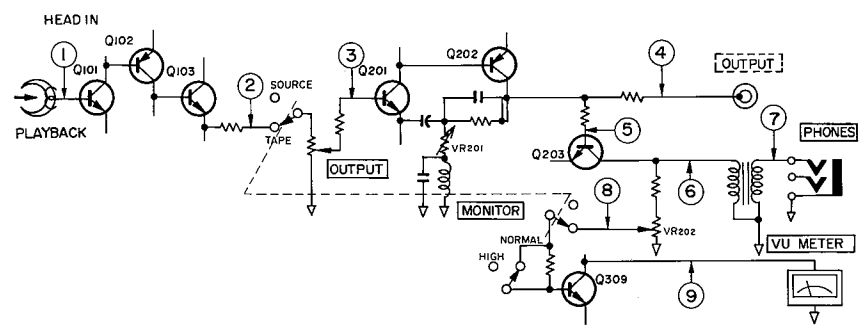
PLAYBACK

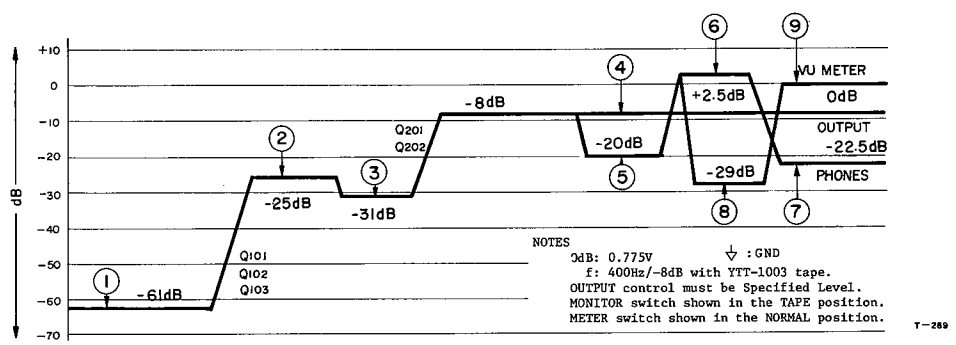
A-6100





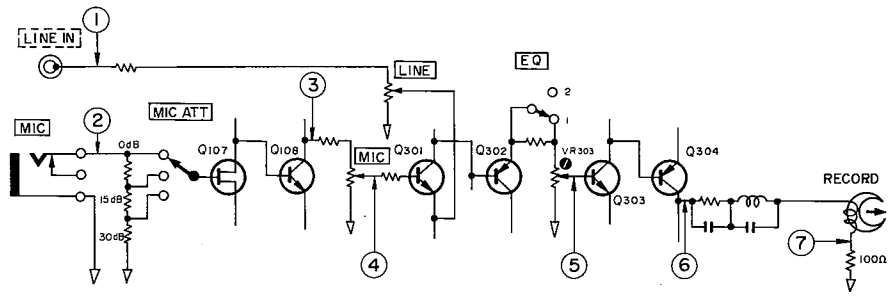
A-6300

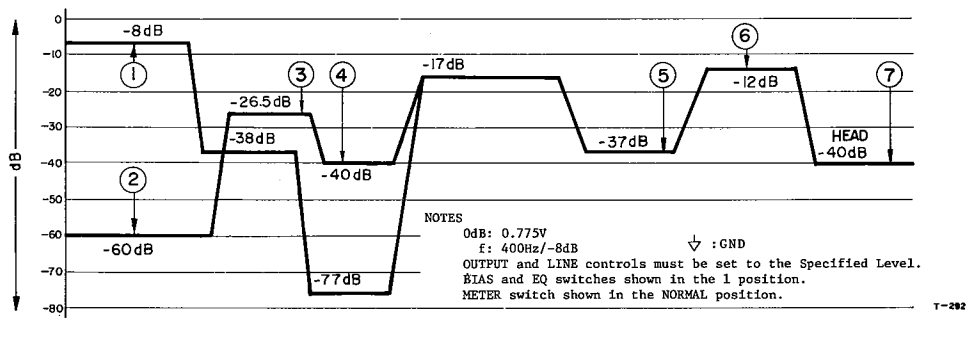




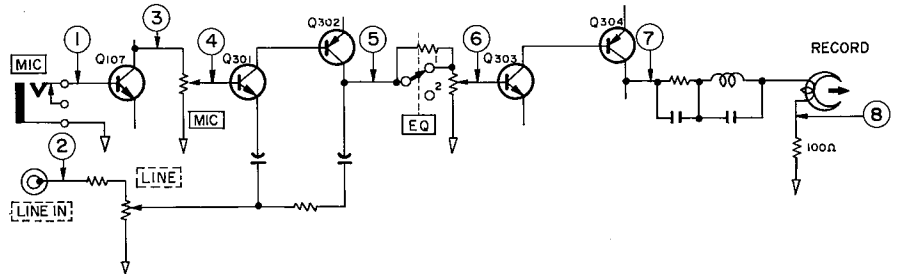
RECORD

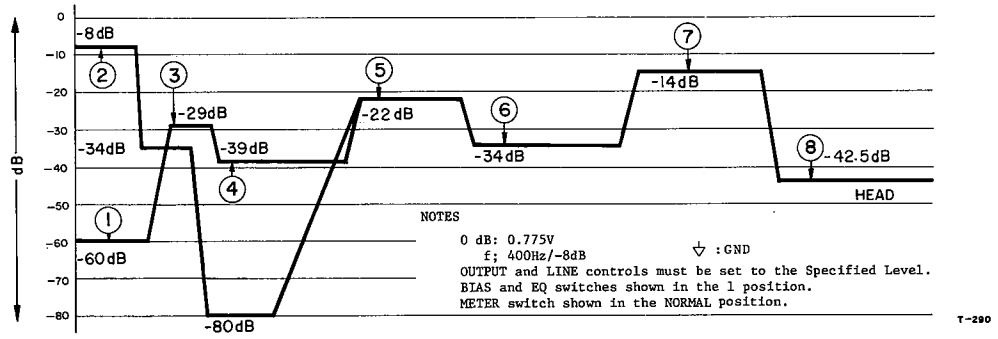
A-6100





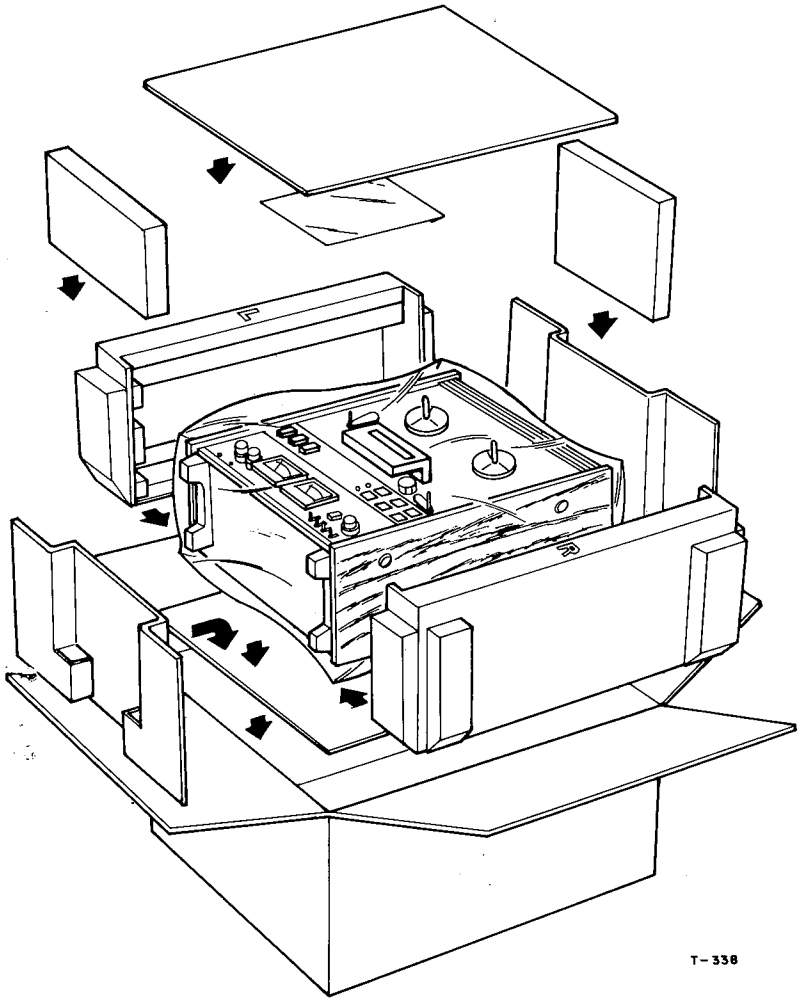
A-6300





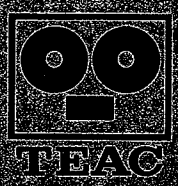
PACKING FOR SHIPMENT

Keep this Carton Box and its packing materials. For shipping, re-pack as shown in the illustration.



WARRANTY

Your TEAC equipment has been manufactured under the strictest quality control and is covered by warranty under normal operation. However, warranty terms may vary with the country (area) in which it was purchased and for different models of equipment.
The warranty terms are fully described on the warranty card. Please read the card for complete details. Include a copy of the warranty in the package when you return the equipment to an Authorized Service Center.



TEAC CORPORATION 3-7-3 NAKA-CHO, MUSASHINO, TOKYO PHONE: (0422) 53-1111

TEAC CORPORATION OF AMERICA 7733 TELEGRAPH ROAD, MONTEBELLO, CALIFORNIA 90640 PHONE: (213) 726-0303

PRINTED IN JAPAN 0478-SYU-04

TEAC®

A-6100/A-6300

2CHANNEL STEREO TAPE DECKS

PARTS LIST

E

TEAC CORPORATION

Effective : October, 1974
Latest Revision No. : E-734

51031481

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PARTS ORDERING INFORMATION

Replacement parts are available through your nearest TEAC Authorized Service Center or directly from the TEAC office, the address of which is written on the back cover.
Changes are constantly being made to make TEAC products better and more reliable.
Therefore, when ordering parts, always include the following information:

1. MODEL	4. DESCRIPTION
2. FIG.REF.NO.	5. UNIT SERIAL NO.
3. TEAC PARTS NO.	6. MANUAL CODE NO.

NOTICE REGARDING PARTS ORDERS

1. The Schematic Diagram Circuit Reference Numbers should not be used for ordering parts. Use of those numbers will result in confusion and might bring you the wrong part. To insure the correct part from your order, always use the TEAC PARTS NUMBER and include all information as requested above.
2. To insure rapid parts identification and thus rapid delivery of the part you desire, always include the MANUAL CODE NUMBER with each part or group of parts from a specific manual. This Manual Code Number is printed on the lower right-hand corner of the Parts List Manual, front page.
3. In some instances, individual minor parts are not available. In such a case, the entire assembly including the part requested will be sent to you.

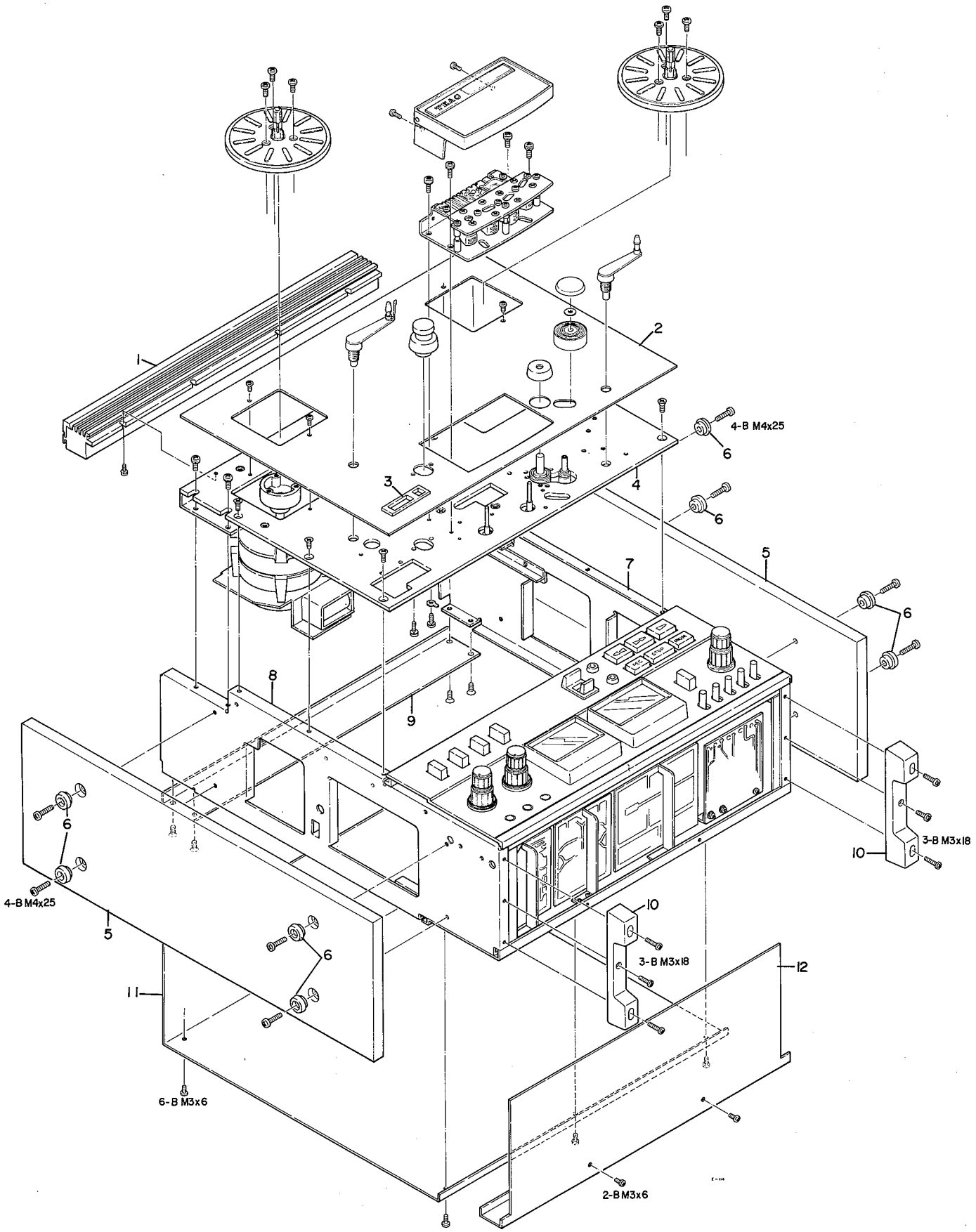
MARKET MODEL IDENTIFICATION ABBREVIATIONS

DM:	For only domestic (Japan) market decks.
EX:	For all export versions (except TCA or Japan).
TCA:	For TCA (TEAC Corporation of America, U.S.A.) versions only.

PARTS LIST AND EXPLODED VIEWS

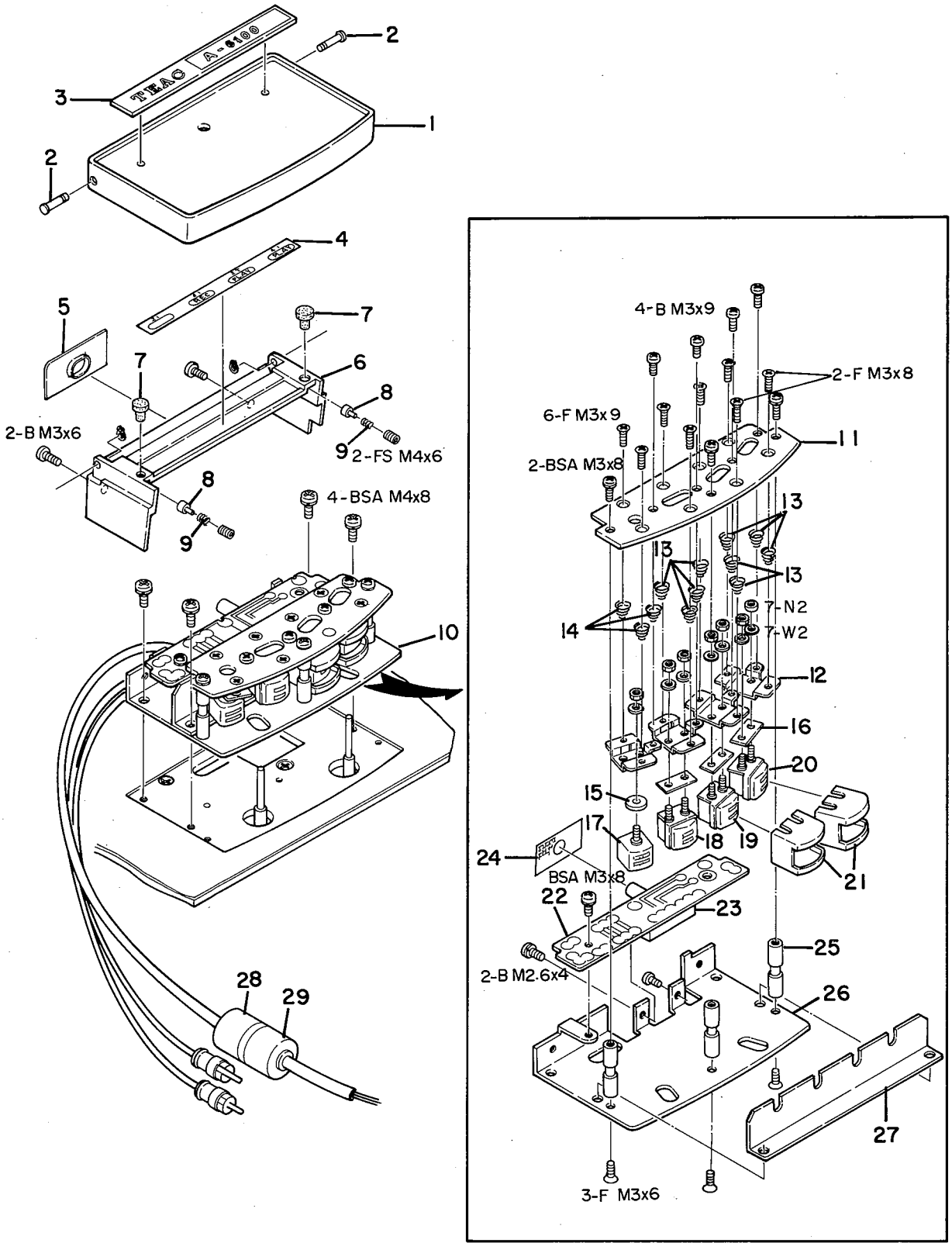
A-6100 / A-6300

1. TRIM AND CABINET PARTS



REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
1-1	50112980	Grille Assy, Top	
1-2	55520050	Panel, Trim (A-6100)	
	55520060	" , " (A-6300)	
1-3	50277020	Cover, Counter	
1-4	55520070	Panel, Chassis	
1-5	55040120	Sideboard	
1-6	50276930	Washer, Trim	
1-7	55030080	Panel Assy, Side; R	
1-8	55030070	" , " ; L	
1-9	50235312	Angle, Rear Cover	
1-10	55340150	Feet, Case	
1-11	55530180	Cover, Rear	
1-12	55040130	Cover Assy, Bottom	

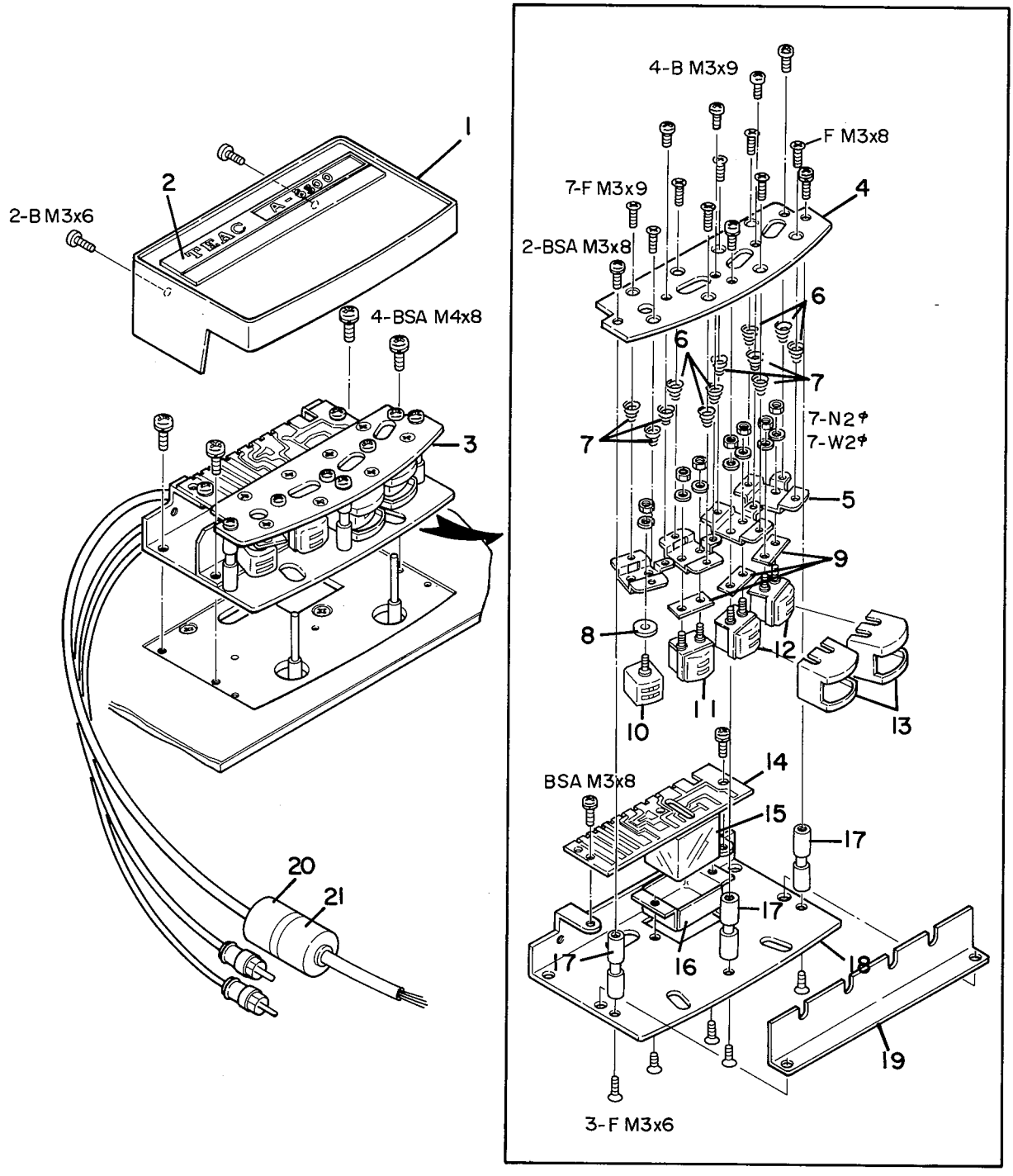
2. HEAD ASSEMBLY (A-6100)



E-115

REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
2-1	55330010	Head Housing, A	
2-2	55440240	Pin, Head Housing	
2-3	55308770	Name Plate [A-6100]	
2-4	55540620	Seal, Head Identification	
2-5	55540630	Plate, Playback Head Selector	
2-6	55330020	Head Housing, B	
2-7	55305390	Cushion, Rubber	
2-8	55340120	Shaft, Push	
2-9	55202260	Spring, Push	
2-10	55903250	Head Assy, A-6100	
2-11	55501331	Plate, Head Base	
2-12	50134371	Plate, E•R•P Head	
2-13	55201820	Spring, Head; D	
2-14	50220500	" , " ; B	
2-15	50136540	Spacer, Erase Head	
2-16	55501510	Spacer, Head; A	
2-17	50662030	Head, Erase (2T-2CH)	
2-18	50664520	" , Record (2T-2CH)	
2-19	50664530	" , Playback (2T-2CH)	
2-20	50664550	" , " (4T-2CH)	
2-21	50133891	Shield, Head; A	
2-22	51681390	PC Bd. Assy, Head	
2-23	50444720	SW, Slide; Playback Head Selector	
2-24	50829850	Mask, SW	
2-25	50182672	Pin, Tape Guide	
2-26	55530130	Plate, Housing Base	
2-27	55541060	Bracket, Protector; B	
2-28	50432740	Connector, 9P (Plug)	
2-29	50435080	" , " (Socket)	

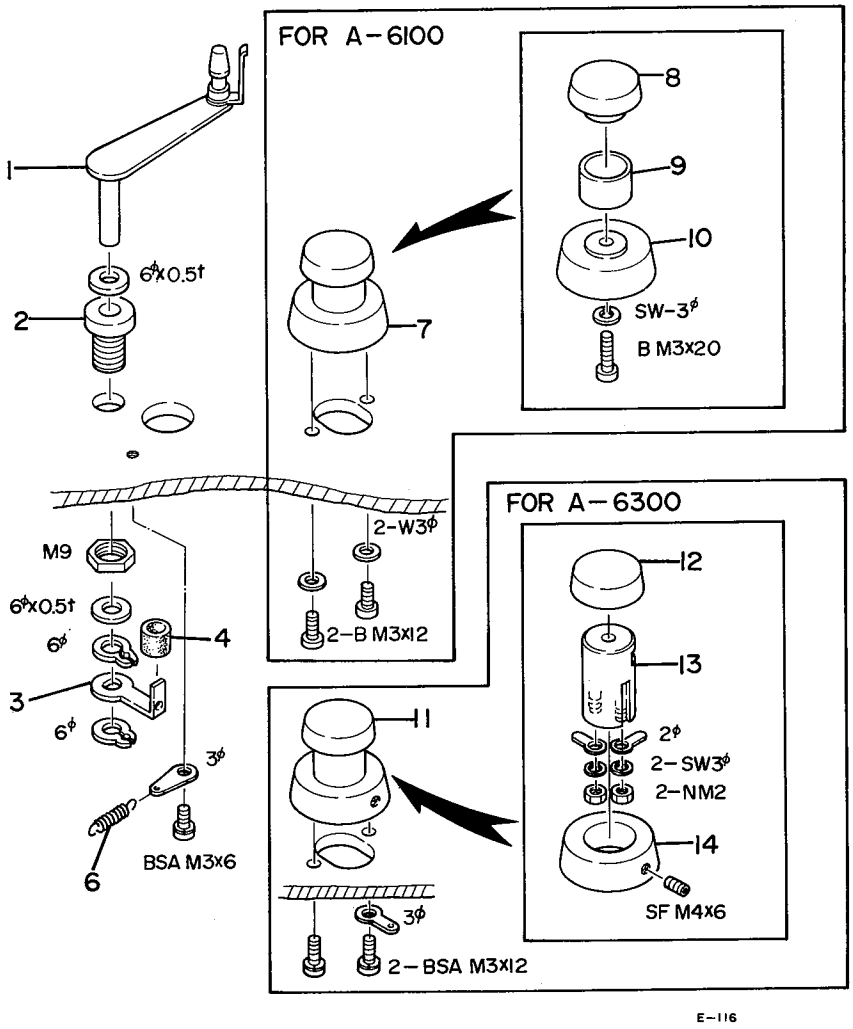
3. HEAD ASSEMBLY (A-6300)



E-122

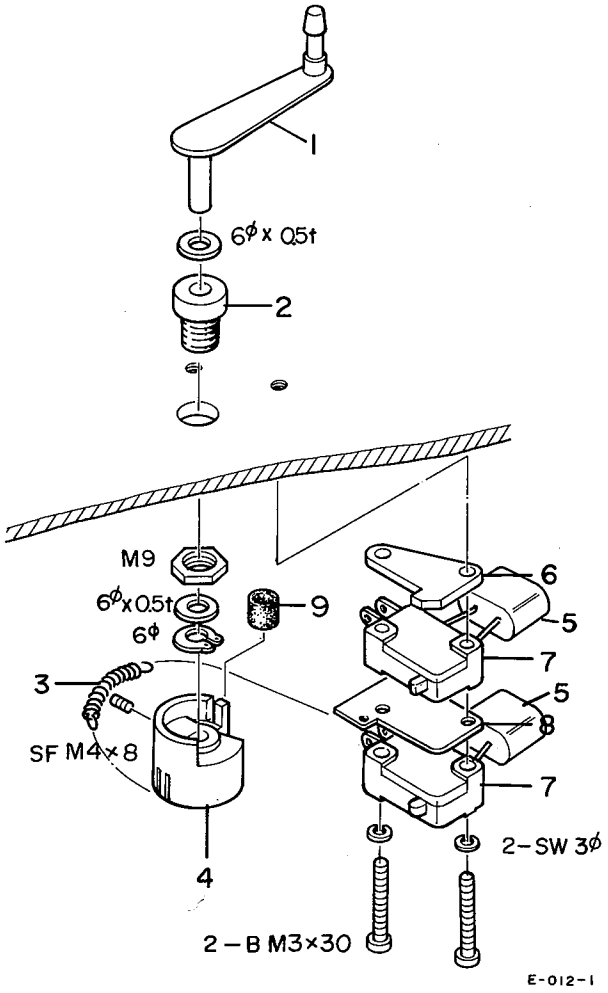
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
3-1	50136750	Head Housing	
3-2	55308750	Name Plate [A-6300]	
3-3	55903260	Head Assy, A-6300	
3-4	55501331	Plate, Head Base	
3-5	50134371	Plate, E·R·P Head	
3-6	55201820	Spring, Head; D	
3-7	50220500	" , " ; B	
3-8	50136540	Spacer, Erase Head	
3-9	55501510	Spacer, Head; A	
3-10	50663030	Head, Erase (4T-2CH)	
3-11	50664540	" , Record (4T-2CH)	
3-12	50664550	" , Playback (4T-2CH)	
3-13	50133891	Head Shield, A	
3-14	51681380	PC Bd, Assy, Head	
3-15	50611210	Relay, Head Selector (K8)	
3-16	50135780	Relay Holder	
3-17	50182672	Pin, Tape Guide	
3-18	55501351	Plate, Housing Base	
3-19	55501340	Bracket, Protector	
3-20	50432740	Connector, 9P (Plug)	
3-21	50435080	" , " (Socket)	

4. LEFT TENSION ARM ASSY



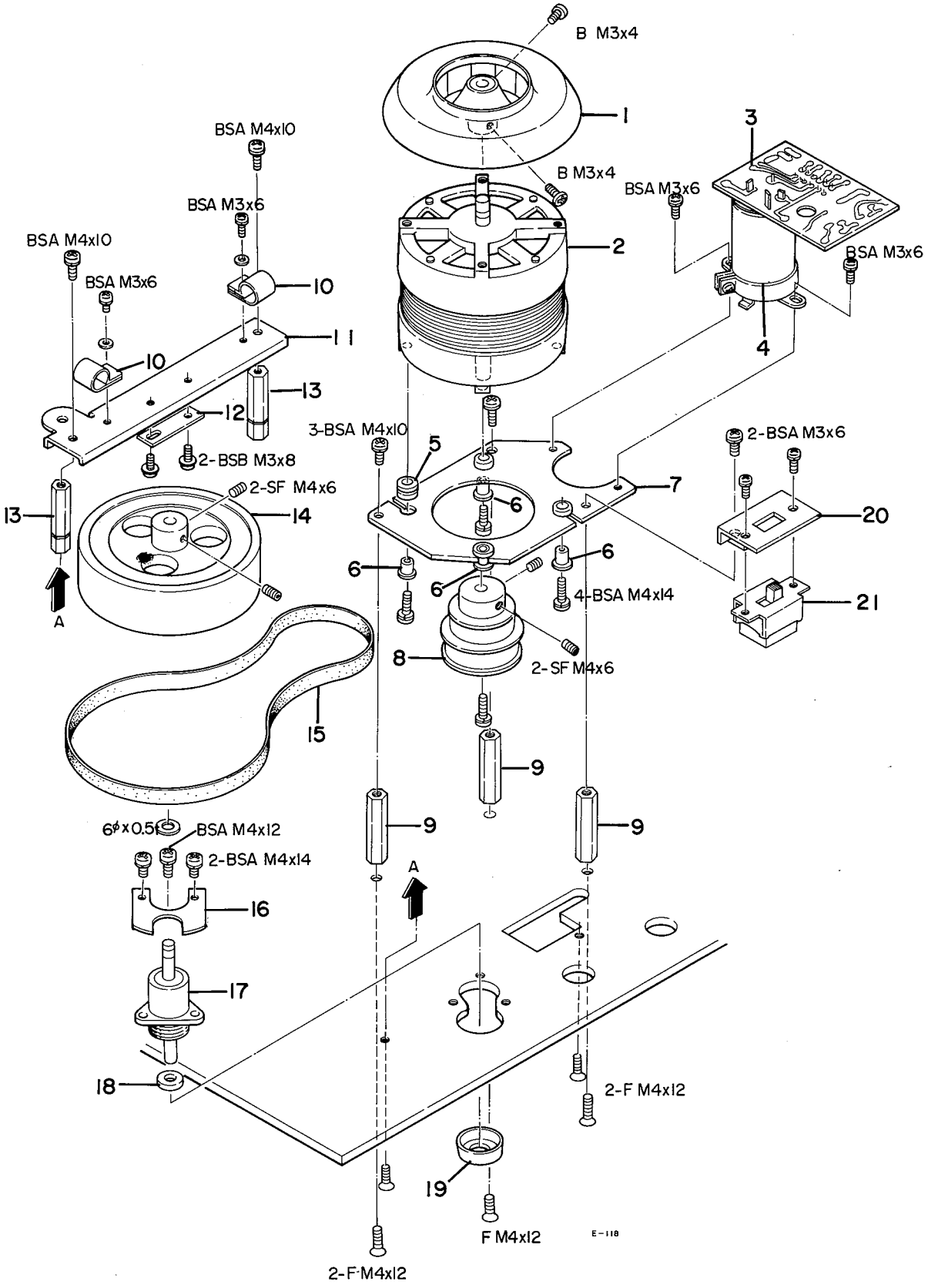
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
4-1	55040330	Tension Arm Assy, L	
4-2	55300831	Bushing, Arm; C	
4-3	50182750	Travel Limiter, Tension Arm	
4-4	50276990	Collar, Rubber	
4-5		(not used)	
4-6	50221110	Spring, B	
4-7	55040080	Guide Ring Assy (A-6100)	
4-8	55440280	Cap, Guide Ring	
4-9	55440290	Ring, Guide	
4-10	55440300	Guide Ring Base	
4-11	55000710	Guide Assy, Sensing (A-6100)	
4-12	55400870	Cap, Sensing	
4-13	55300820	Guide, Sensing	
	55400860	Sensing Bar	
4-14	55400850	Ring, Guide	

5. RIGHT TENSION ARM ASSY



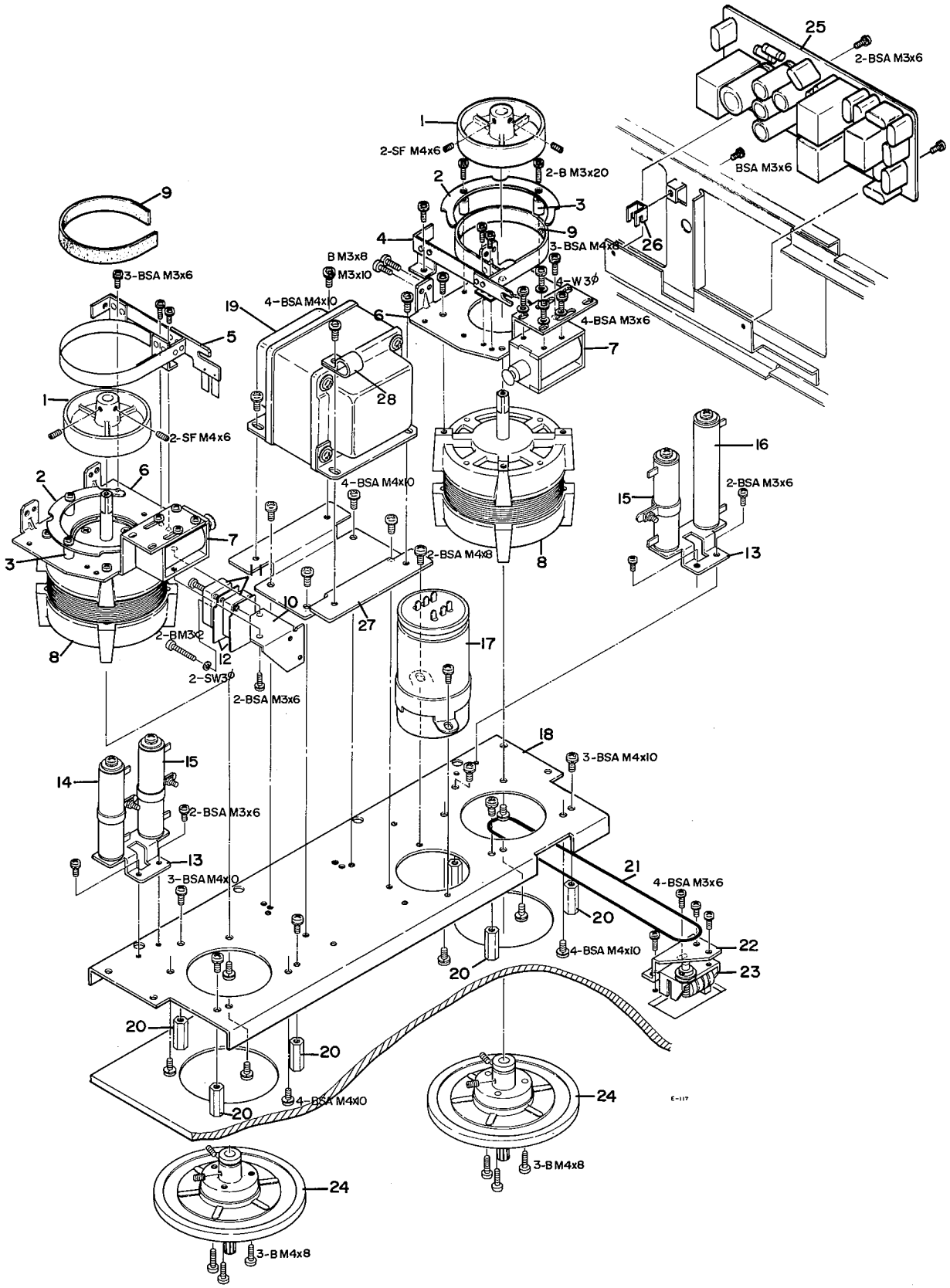
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
5-1	55000720	Tension Arm Assy	
5-2	55300831	Bushing, Arm; C	
5-3	50221122	Spring, C	
5-4	50183921	Drum, Tension Arm	
5-5	50529050	Spark Killer, 0.1μF + 120Ω 400V	
5-6	50182730	Limit Stop, Right	
5-7	51300010	SW, Micro; V-1A44 (S2·3)	
5-8	50183931	Spacer, Insulator Paper	
5-9	55301430	Cushion, Rubber	

6. CAPSTAN DRIVE ASSEMBLY



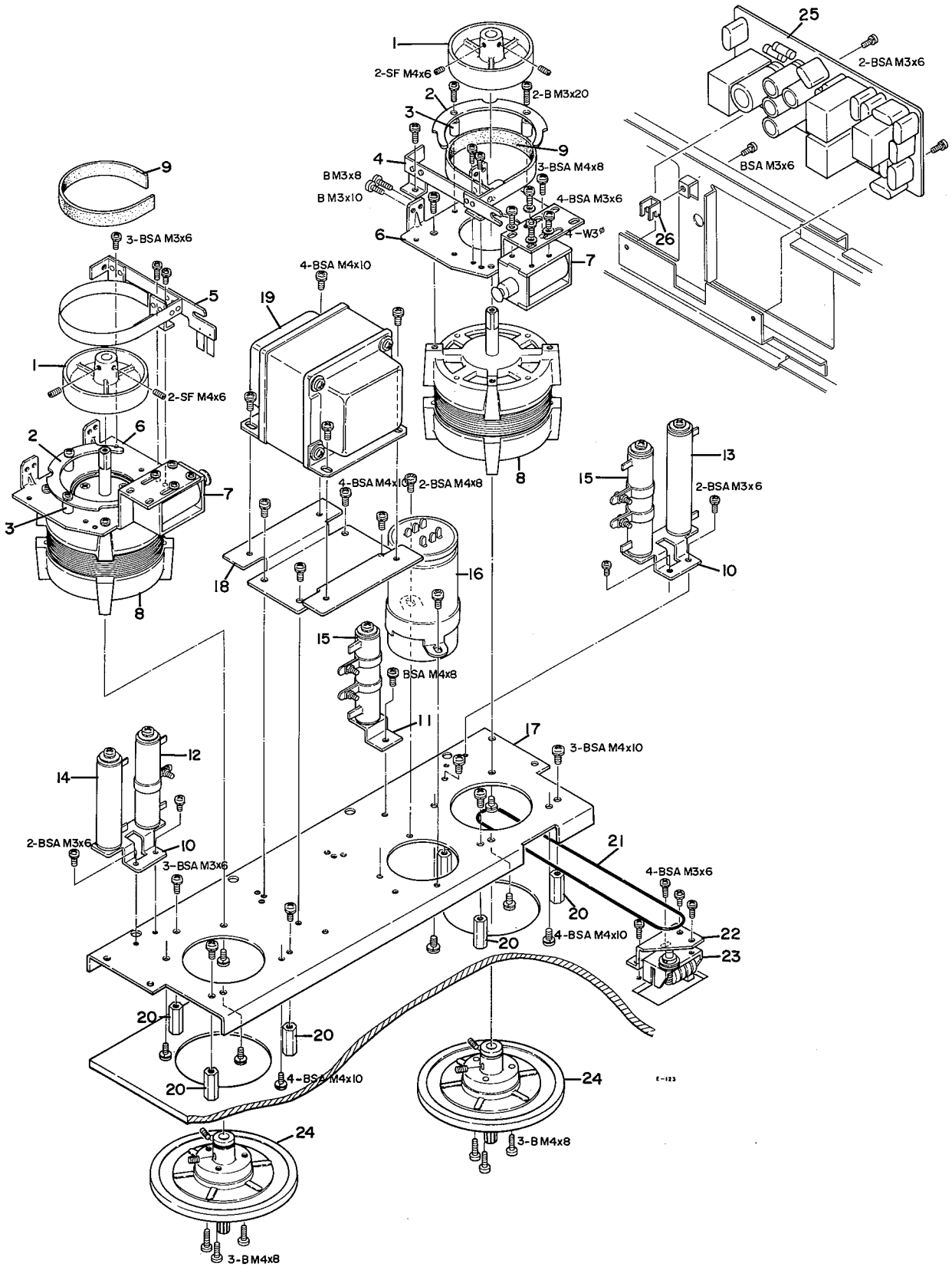
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
6-1	50123983	Fan, Motor Cooling	
6-2	50701341	Motor, Capstan	
6-3	51681030	PC Bd. Assy, Terminal (w/o Cap.) (A-6300)	
	51681040	" " (A-6100)	
6-4	50545650	MP, (2 + 0.8)μF 250V	
6-5	50706211	Cushion, Rubber	
6-6	50332790	Spacer, Rubber Cushion	
6-7	50237520	Plate, Capstan Motor	
6-8	50124003	Pulley, Motor (50HZ/60HZ) (DM, EX)	
	50125121	" , " (60HZ) (TCA)	
6-9	50123850	Standoff, Capstan Motor	
6-10	55340410	Clamp, Wire	
6-11	55540580	Angle, Thrust; B	
6-12	50277232	Plate, Thrust	
6-13	50123860	Standoff, Flywheel	
6-14	50123802	Flywheel, Capstan	
6-15	50123830	Belt, Capstan (A-6300)	
	50125340	" , " (A-6100)	
6-16	50142190	Plate, Arm Support	
6-17	50120440	Capstan Assy (19cm/s) (A-6300)	
	50120450	" (38cm/s) (A-6100)	
6-18	50123900	Gasket, Rubber	
6-19	55400810	Cap, Dust (A-6300)	
	55440200	" , " (A-6100)	
6-20	50332380	Bracket, Slide SW (DM, EX)	
6-21	50444610	SW, Slide; Freq. Conv. (S13) (DM, EX)	

7. REEL DRIVE ASSEMBLIES (A-6100)



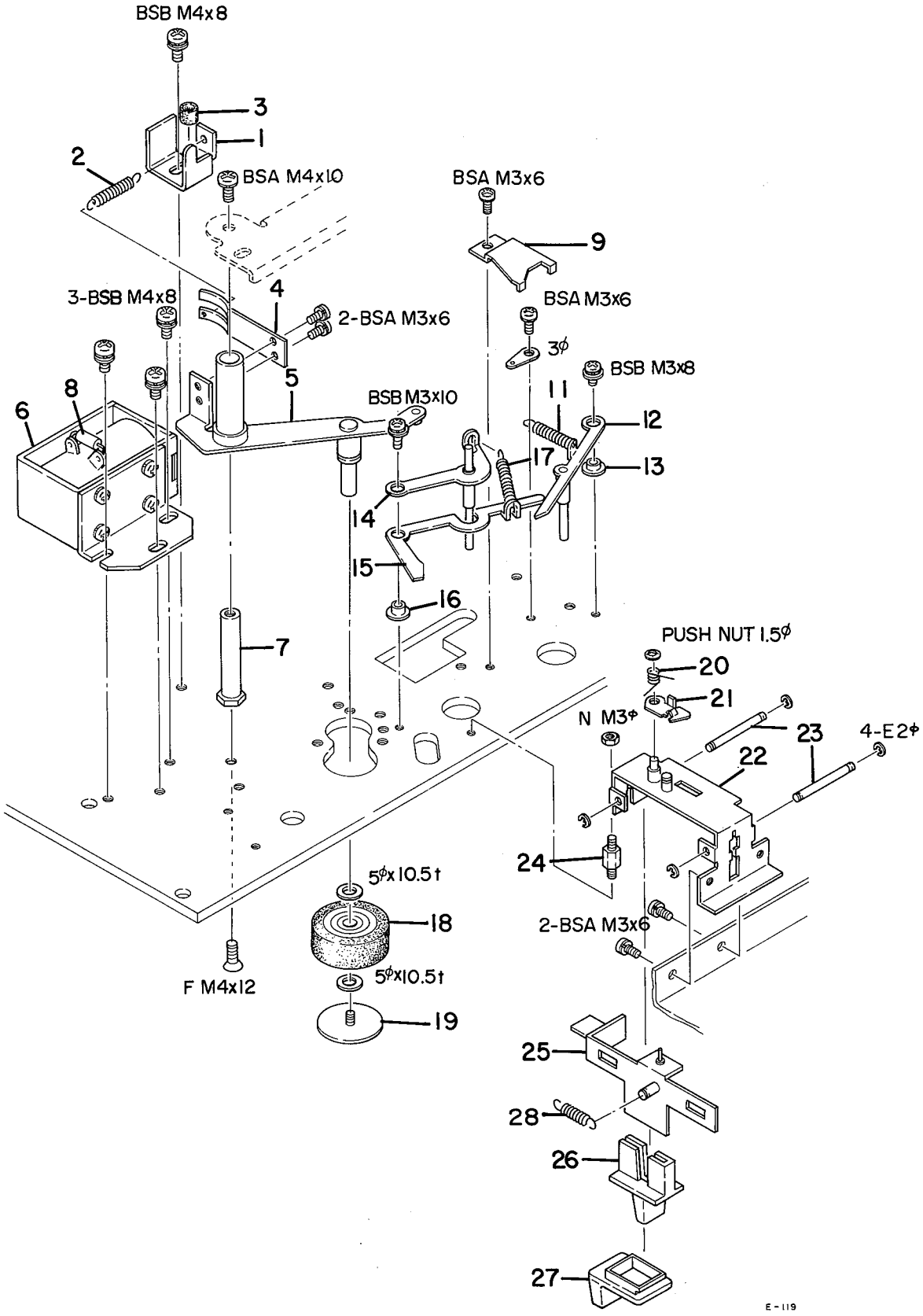
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
7-1	50173570	Drum, Brake	
7-2	50173481	Retainer, Brake Shaping	
7-3	50173490	Spacer, Brake Shaping Retainer	
7-4	50173331	Brake Band Assy, L	
7-5	50173610	" , P	
7-6	50173600	Plate, Reel Motor; P	
7-7	50616770	Solenoid, Brake	
7-8	71041070	Motor, Reel	
7-9	50173410	Felt, Brake	
7-10	50173640	Plate, Micro SW	
7-11	50446180	SW, Micro, V-1A44 (S10·11)	
7-12	50332680	Spacer, Insulator Paper	
7-13	55540570	Plate, Resistor	
7-14	50524412	Wire Wound, 100Ω 30HA (R10)	
7-15	50522280	" , 250Ω 30HA (R11)	
7-16	50522320	" , 600Ω 40H (R13)	
7-17	51700050	MP; (7 + 1.5)μF × 2 250V (C10·11)	
7-18	55520100	Chassis, Reel Motor	
7-19	50563450	Transformer, Power (DM)	
	50563470	" , " (EX)	
	50563500	" , " (TCA)	
7-20	50161950	Standoff, Rell Motor	
7-21	55340110	Belt, Counter	
7-22	50279970	Plate, Counter	
7-23	50585150	Counter, Index	
7-24	55040070	Rell Table Assy	
7-25	51681062	PC Bd. Assy, Power Supply (A-6100)	
7-26	55505310	Bracket, PC Board	
7-27	55540690	Plate, Transformer (EX)	
7-28	55340410	Clamp, Wire; A	

8. REEL DRIVE ASSEMBLIES (A-6300)



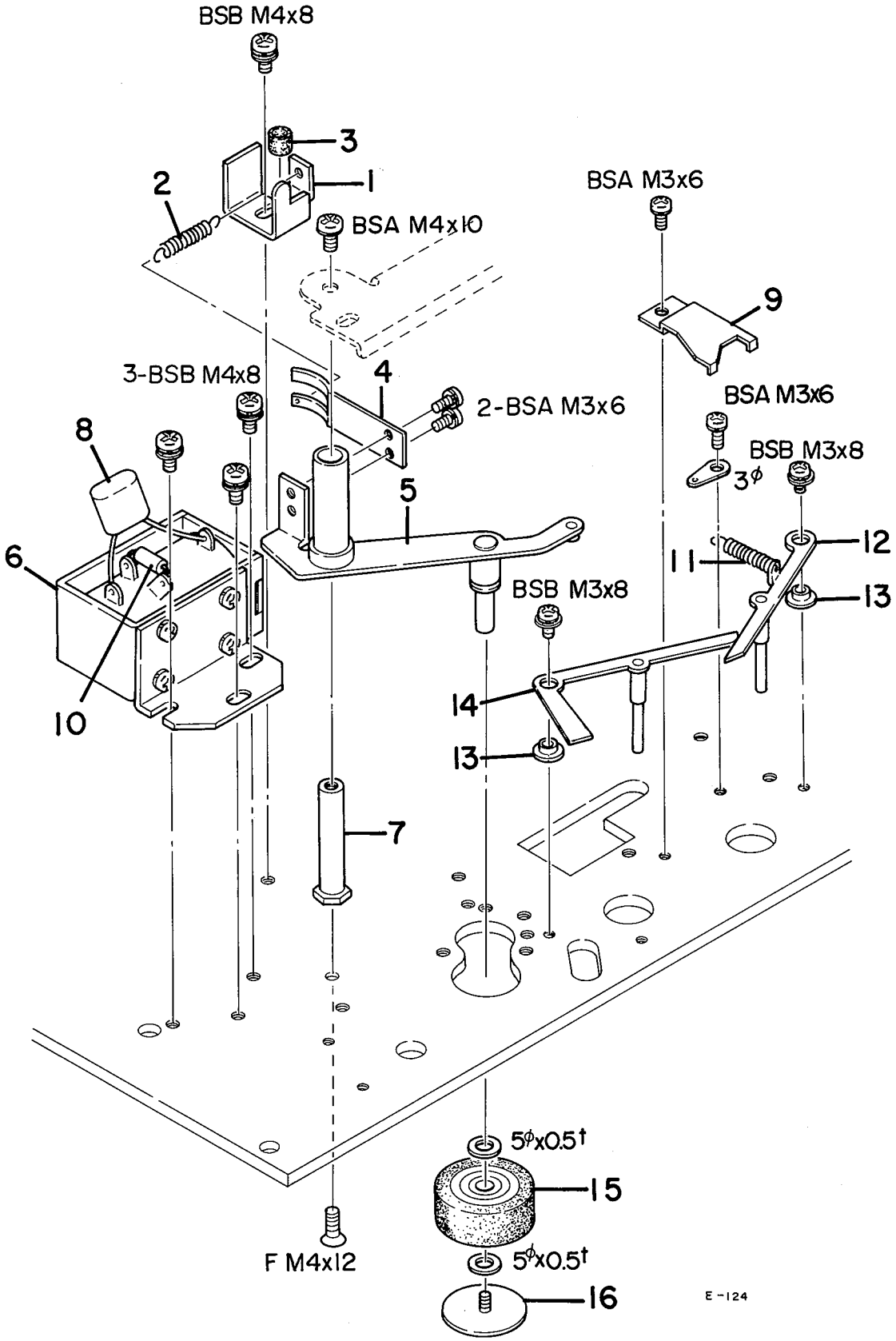
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
8-1	50173570	Drum, Brake	
8-2	50173481	Retainer, Brake Shaping	
8-3	50173490	Spacer, Brake Shaping Retainer	
8-4	50173331	Brake Band Assy, L	
8-5	50173610	" , P	
8-6	50173600	Plate, Reel Motor; P	
8-7	50166770	Solenoid, Brake	
8-8	71041070	Motor, Reel	
8-9	50173410	Felt, Brake	
8-10	55540570	Plate, Resistor	
8-11	50332900	Angle, Resistor	
8-12	50524460	Wire Wound, 130Ω 30HA (R18)	
8-13	50522320	" , 600Ω 40H (R26)	
8-14	50522400	" , 150Ω 40HAA (R19·25)	
8-15	50524470		
8-16	51700050	MP, (7 + 1.5)μF × 2 250V (C17·18)	
8-17	55520100	Chassis, Reel Motor	
8-18	55540690	Plate, Transformer (DM, EX)	
8-19	50563420	Transformer, Power (DM)	
	50563430	" , " (EX)	
	50563440	" , " (TCA)	
8-20	50161950	Standoff, Reel Motor	
8-21	55340110	Belt, Counter	
8-22	50279970	Plate, Counter	
8-23	50585150	Counter, Index	
8-24	55040070	Reel Table Assy	
8-25	51681022	PC Bd. Assy, Power Supply (A-6300)	
8-26	55505310	Bracket, PC Board	

9. CUE AND PINCH ROLLER ASSY (A-6100)



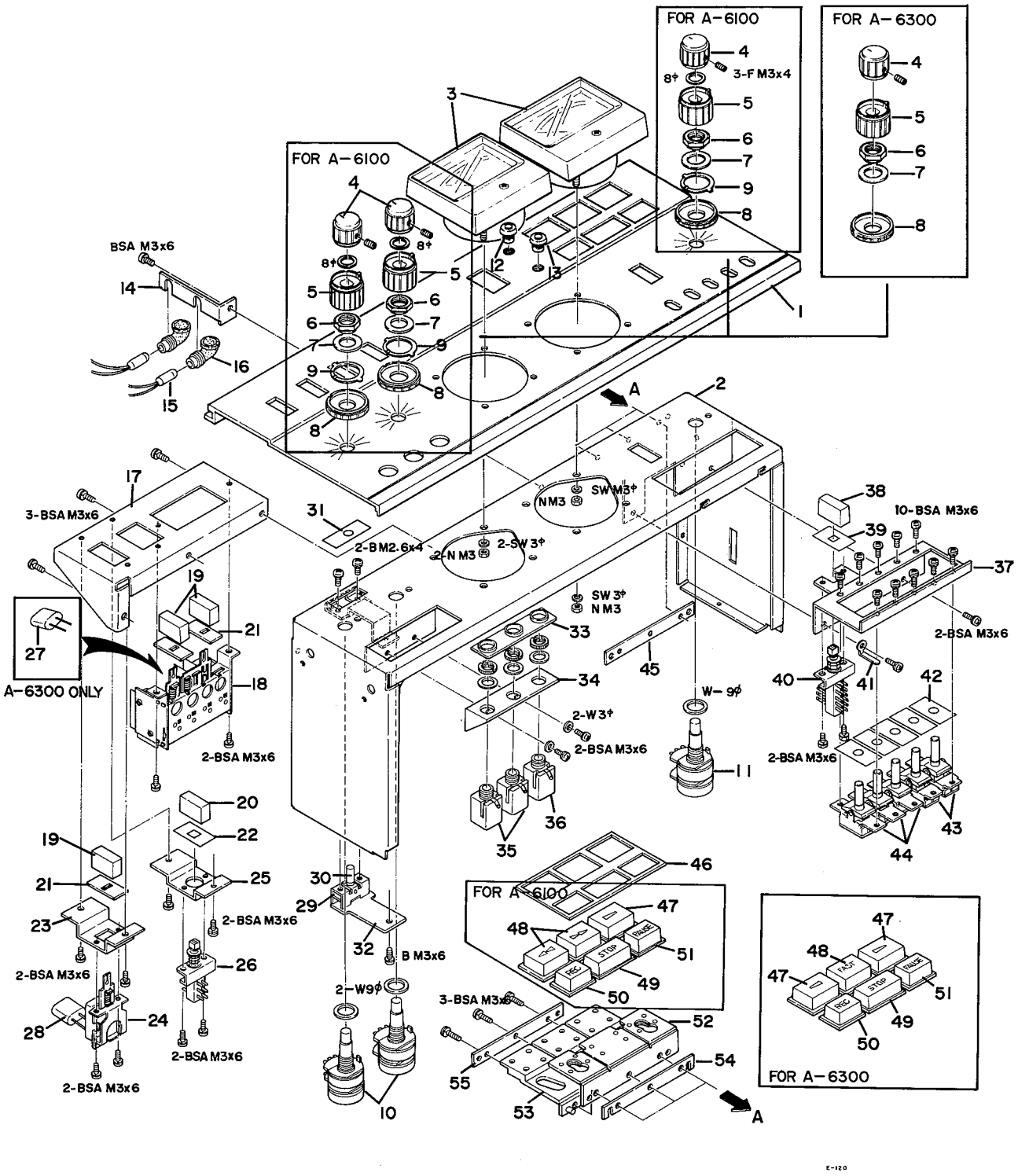
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
9-1	50141842	Limit Stop, Pinch Roller	
9-2	55240080	Spring, Return	
9-3	50275690	Cushion, Rubber	
9-4	55200620	Spring, Pressure; B	
9-5	55640160	Arm Assy, Pinch Roller	
9-6	51630040	Solenoid Assy, Pinch Roller	
9-7	50141821	Shaft, Roller Arm	
9-8	50422570	Diode, SIB01-06 (D18)	
9-9	55541120	Plate, Lifter; B	
9-10		(not used)	
9-11	50221100	Spring, Lifter; A	
9-12	55000740	Arm Assy, Lifter; R	
9-13	50152501	Shaft, Lifter Arm	
9-14	55040190	Lifter Assy, Cue	
9-15	55541180	Arm, Cue	
9-16	55440220	Shaft, Lifter Arm	
9-17	55200030	Spring	
9-18	50141751	Pinch roller	
9-19	50142180	Cap, Pinch Roller	
9-20	55200161	Spring, Pause Lock	
9-21	55500270	Plate, Pause Lock	
9-22	55040100	Guide Assy, Cue	
9-23	55440330	Shaft, Guide	
9-24	55440230	Stud, Cue	
9-25	55040110	Linkage Assy, Cue	
9-26	55305150	Lever, Cue	
9-27	55305300	Hook, Cue Lever	
9-28	55200030	Spring	

10. PINCH ROLLER ASSEMBLY (A-6300)



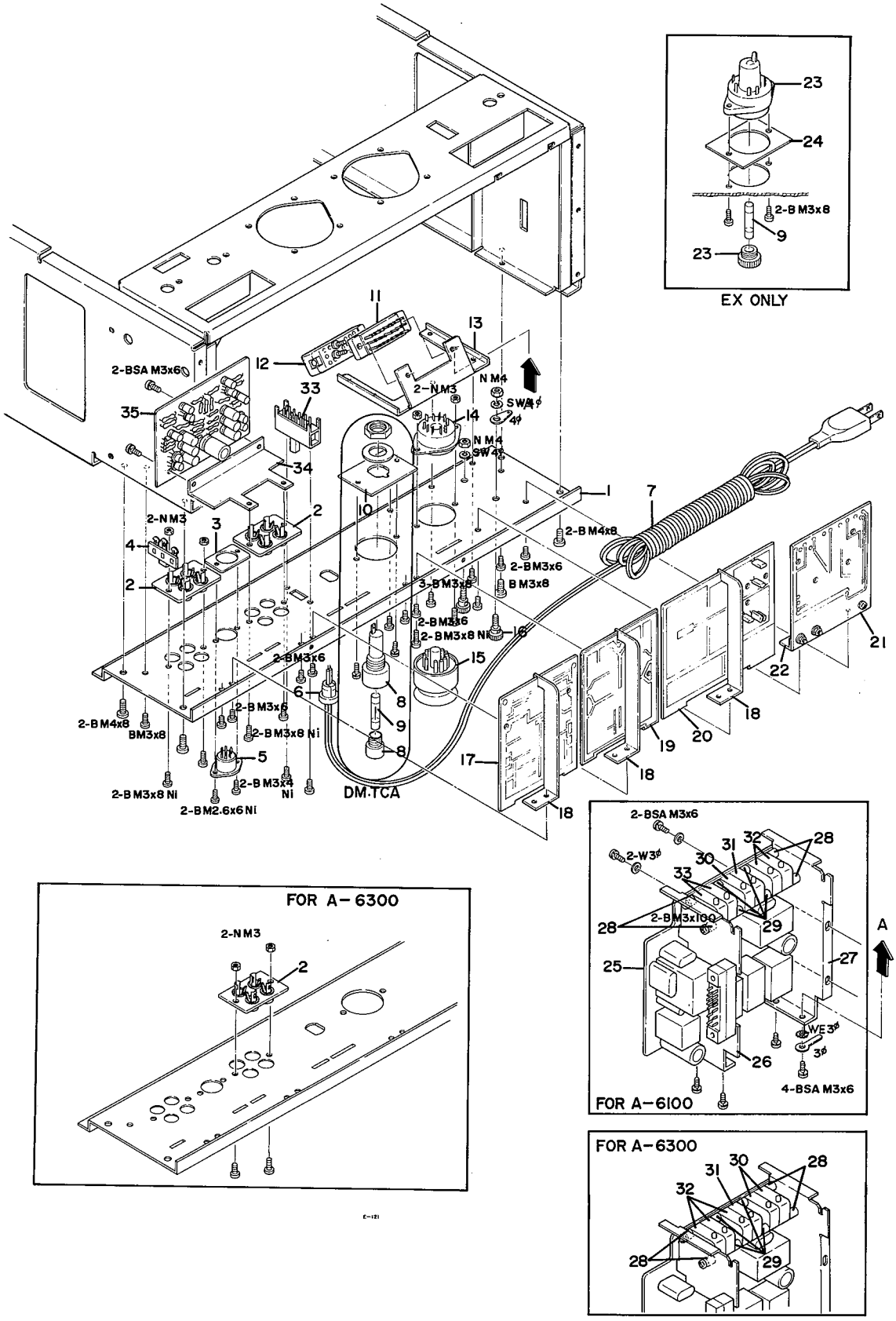
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
10-1	50141842	Limit Stop, Pinch Roller	
10-2	50220441	Spring, Return	
10-3	50275690	Cushion, Rubber	
10-4	55200620	Spring, Pressure; B	
10-5	55640160	Arm Assy, Pinch Roller	
10-6	50616691	Solenoid Assy, Pinch Roller	
10-7	50141821	Shaft, Roller Arm	
10-8	50529050	Spark Killer, 0.1μF + 120Ω 400V	
10-9	55540610	Plate, Lifter	
10-10	50422570	Diode, SIB01-06 (D15)	
10-11	50221100	Spring, Lifter; A	
10-12	55000740	Arm Assy, Lifter, R	
10-13	50152501	Shaft, Lifter Arm	
10-14	55000730	Arm Assy, Lifter, L	
10-15	50141751	Pinch Roller	
10-16	50142180	Cap, Pinch Roller	

11. PREAMPLIFIER, FRONT SECTION



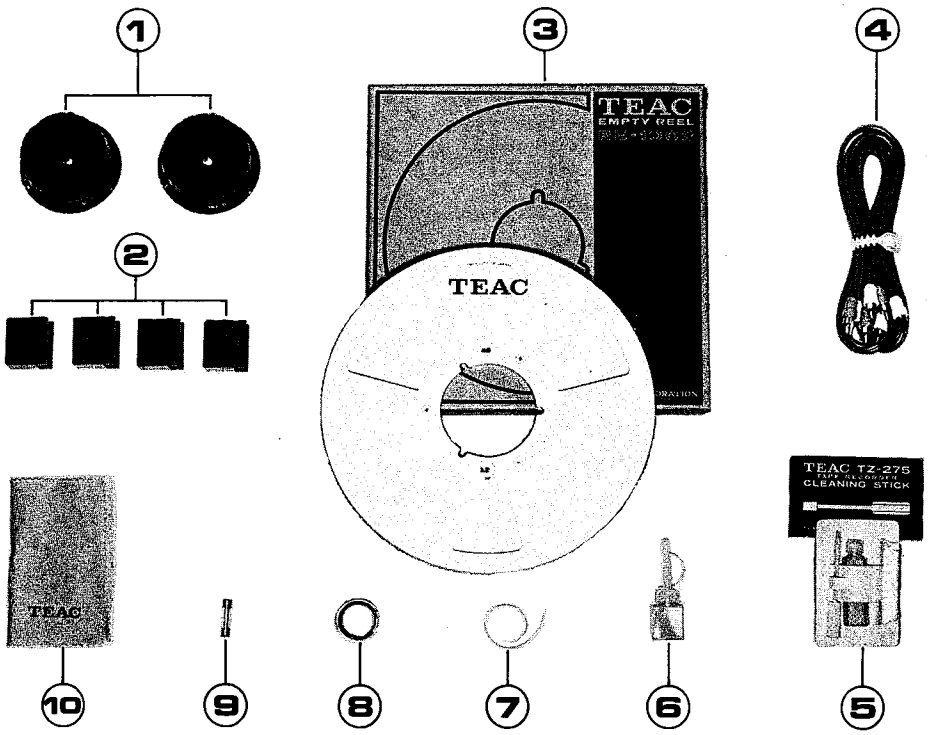
REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
11-1	55020041	Panel, Ampl. Trim (A-6100)	
	55020031	" , " (A-6300)	
11-2	55020050	Chassis, Ampl. Assy; A (A-6100)	
	55020060	" , " ; B (A-6300)	
11-3	50581470	VU Meter (A-6100)	
	50581480	" (A-6300)	
11-4	55440581	Knob, Upper	
11-5	55040350	" , B (A-6100)	
	55040340	" , Lower (A-6300)	
11-6	55400821	Lock Nut	
11-7	55200610	Washer, Wave	
11-8	55340130	Guide, Memory Marker (A-6100)	
	55300750	" , " (A-6300)	
11-9	55202270		
11-10	50537100	VR, 10kΩ, × 2; MIC/LINE	
11-11	50537250	", 100kΩ A × 2; OUTPUT (VR501/504) (A-6100)	
	50537090	", " ; " (") (A-6300)	
11-12	55040510	Cover, Lamp; PAUSE (Green)	
11-13	55040520	" , " ; RECORD (Red)	
11-14	55540660	Bracket, Lamp	
11-15	50414600	Lamp, Pilot	
11-16	50415241	Holder, Lamp	
11-17	55530161	Bracket, SW	
11-18	50443902	SW Assy, Selector, REEL/SPEED (SW509/S12·SW502)	
11-19	50253530	Button, D	
11-20	55340140	Button	
11-21	50253880	Mask, SW	
11-22	55501280	" , "	
11-23	55501161	Plate, Power SW	
11-24	50443870	SW, Double Action; POWER (S1) (DM, EX)	
	50444500	", " ; " (") (TCA)	
11-25	55540650	Plate, Memory SW	
11-26	50443940	SW, Push; MEMORY	
11-27	50549920	Metalized Mylar, 0.1μF 400V AC (A-6300)	
11-28	50529050	Spark Killer, 0.1μF + 120Ω 400V (DM, EX)	
	50529060	" , 0.033μF + 120Ω 400V (TCA)	
11-29	50447450	SW, Lever; ATT (SW511) (A-6100)	
11-30	55440400	Knob, Lever; C	
11-31	55540760	Mask, SW; B	
11-32	51681110	PC Bd. Assy, Mic. Attenuator	
11-33	55300760	Insulator Mask, Jack	
11-34	55300770	Bracket, Jack Mounting	
11-35	50430240	Jack, Phone; 2-Wire, MIC	
11-36	50432450	" , " ; 3-Wire, PHONES	
11-37	55501191	Plate, Lever SW	
11-38	55300800	Button, MONITOR	
11-39	55501280	Mask, SW	
11-40	50444640	SW, Miniature Push; MONITOR (SW501)	
11-41	50939280	Clamp, B	
11-42	50829850	Mak, SW	
11-43	50447210	SW, Lever; 4PDT, RECORD MODE	
11-44	50447220	", " ; DPDT	
11-45	50237291	Plate Nut, Retaining	
11-46	50239300	Rubber Protector, P	
11-47	50237201	Button, A [►]	
11-48	50237211	" , B [►►] (A-6100)	
	55300721	" , FAST (A-6300)	
11-49	50237221	" , STOP	
11-50	55300731	" , REC	
11-51	55300741	" , PAUSE	
11-52	55340430	Hinge, A	
11-53	55340440	" , B	
11-54	50332720	Plate, Hinge Adjusting	
11-55	50253870	Plate, Retaining	

12. PREAMPLIFIER, REAR SECTION



REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
12-1	55520130	Panel, Rear Connection, A (A-6100)	
	55520140	" , " , B (A-6300)	
12-2	50436580	Jack, Pin; 4P	
12-3	50233530	Plate, DIN Connector	
12-4	50452060	Terminal Strip, 1L-2P	
12-5	50430010	Connector, DIN	
12-6	55300470	Grommet, AC Power Cord	
12-7	50471652	Cord, AC Power (DM, EX)	
	50471661	" , " (TCA)	
12-8	50924500	Fuse Holder (DM)	
	50412280	" (TCA)	
12-9	50411140	Fuse, 2A (DM, EX 100•117V area)	
	50411010	" , 1A (EX•220 240V area)	
	50411340	" , 2A-250V (TCA)	
12-10	55501151	Adaptor, Fuse Holder (DM, TCA)	
12-11	50436590	Connector, 28P (Plug)	
12-12	50436600	" , " (Socket)	
12-13	55501270	Angle, PC Board	
12-14	50432700	Socket, 11P	
12-15	50433010	Plug, Dummy; 11P (A-6100)	
	50433000	" , " ; " (A-6300)	
12-16	50454071	Post, Grounding	
12-17	51681071	PC Bd. Assy, MIC/PB EQ Ampl. (A-6100)	
	51681351	" , " (A-6300)	
12-18	50233760	Plate, PC Board	
12-19	51681080	PC Bd. Assy, Line Out/Phone Ampl. (A-6100)	
	51681330	" , " (A-6300)	
12-20	51681091	" , Record/Meter Ampl. (A-6100)	
	51681361	" , " (A-6300)	
12-21	51681341	" , Bias Oscillator	
12-22	55501240	Angle, PC Board	
12-23	50435030	Voltage Selector, with Fuse (EX)	
12-24	55501500	Mask, Fuse (EX)	
12-25	51681051	PC Bd. Assy, Control Relay (A-6100)	
	51681011	PC Bd. Assy, Control Relay (A-6300)	
12-26	55530141	Bracket, PC Board Re-inforcing, L	
12-27	55530150	" , " , R	
12-28	55400840	Spacer, A	
12-29	50237160	"	
12-30	50446560	SW, Micro; VV-15-1A	
12-31	50446570	", " ; VV-15-2A	
12-32	50446580	", " ; VV-15-3A	
12-33	50440000	", Slide (A-6100)	
12-34	55540680	Angle, PC Board; P (A-6100)	
12-35	51681371	PC Bd. Assy, Peak Level Indicator Ampl. (A-6100)	

13. SUPPLIED ACCESSORIES

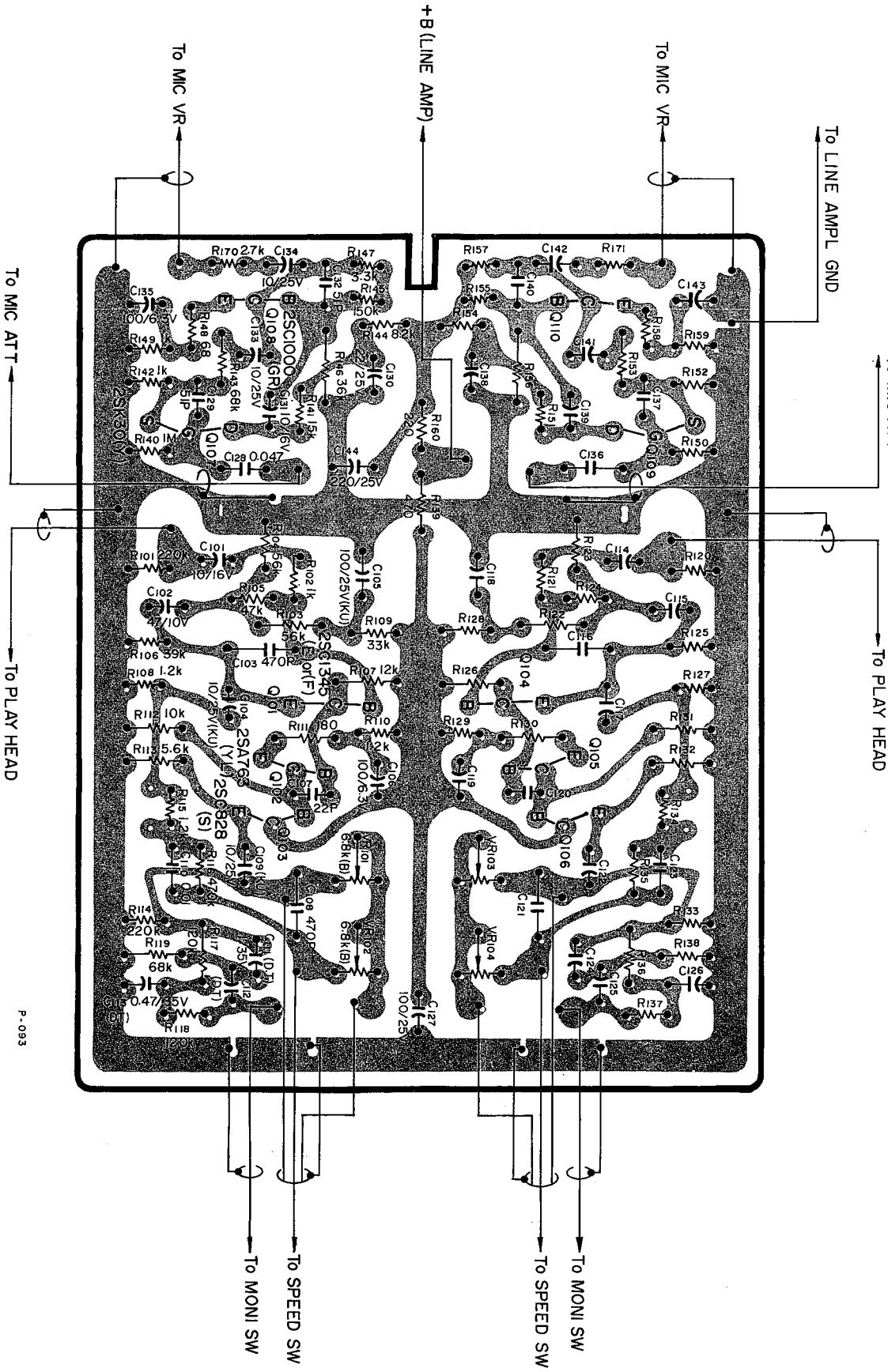


REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
13-1	55980500	Reel Clamp Adapters (TZ-612), ×2	
13-2	50276971	Rubber Feet (for Horizontal Use), ×4	
13-3	*RE-1002	Empty Reel, 10 inch	
13-4	50471250	Input-output Connection Cords, ×2	
13-5	57100300	Cleaning Stick (TZ-275)	
13-6	50291860	Oil and Applicator	
13-7		Sensing Foil	
13-8	50629620	Splicing Tape	
13-9	50411010	Fuse, 1A (EX 220, 240V area)	
	50411140	" , 2A (EX 100, 117V area)	
	50411340	" , 2A-250V (TCA·UL)	
13-10	50291350	Silicone Cloth	
---	51012560	A-6100 Instruction Manual (DM)	
---	51012570	" (EX)	
---	51012580	" (TCA)	
---	51012590	A-6300 Instruction Manual (DM)	
---	51012600	" (EX)	
---	51012610	" (TCA)	

NOTE: The Empty Reel is available as an Optional Accessory and thus is not assigned a special TEAC Parts number. Please order this by the MODEL CODE NUMBER (RE-702). This number is included on the package.

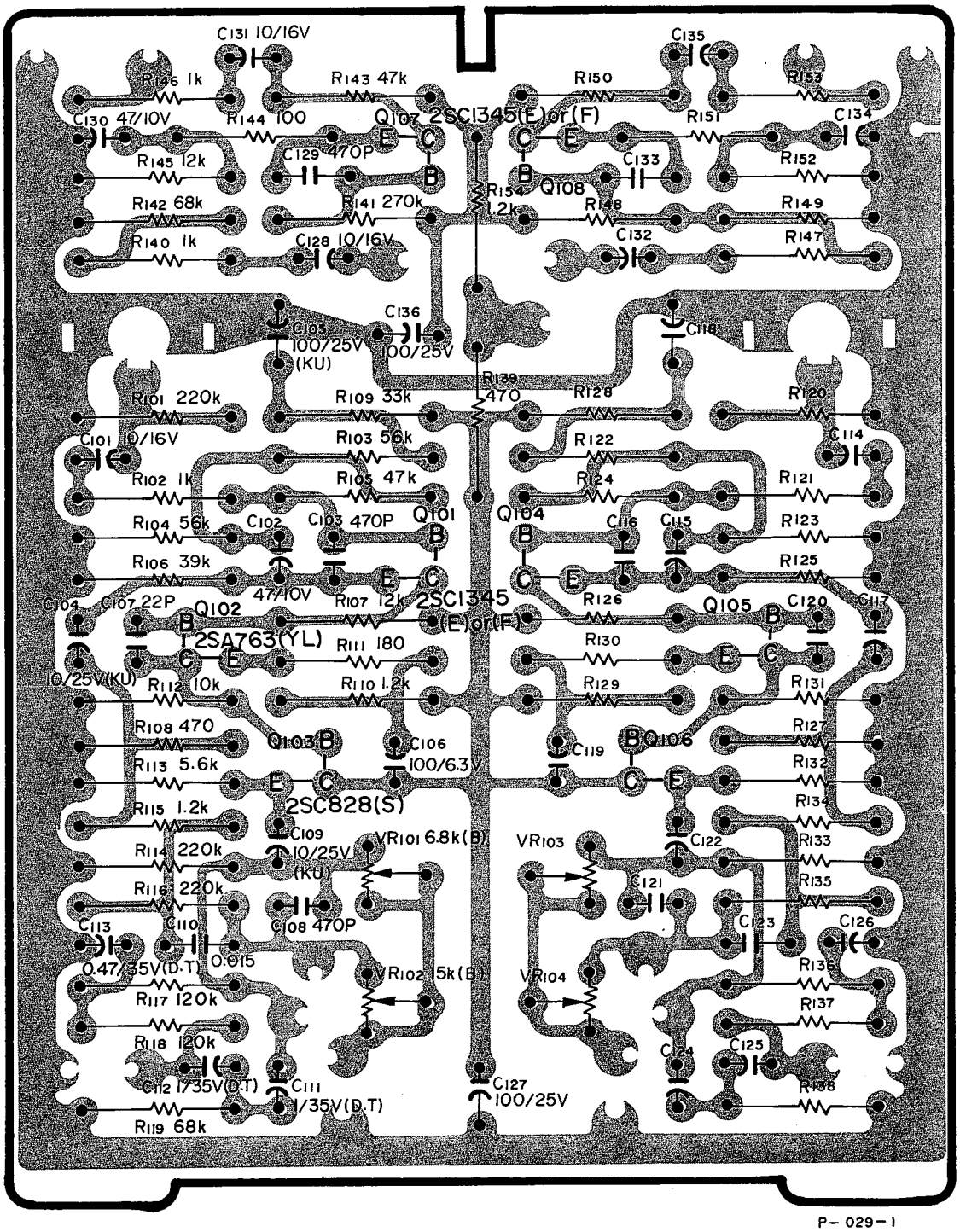
PRINTED CIRCUIT BOARD PARTS LIST
A-6100 / A-6300

1. MIC/PLAYBACK EQ AMPLIFIER (A-6100)



CIRCUIT REF. NO	TEAC PARTS NO	DESCRIPTION
	51681071	PC Bd. Assy
	51671070	PC Bd.
		TRANSISTORS
Q101/Q104	50424710	2SC1345-E or F
Q102/Q105	50424870	2SA763-YL
Q103/Q106	50424600	2SC828-S
Q107/Q109	50423840	FET, 2SK30-Y
Q108/Q110	50424100	2SC1000-GR
		CARBON RESISTORS
R101/R120	50571380	220kΩ 1/4W
R102/R121	50570820	1kΩ "
R103/R122	50571240	56kΩ "
R104/R123	50571240	56kΩ "
R105/R124	50571220	47kΩ "
R106/R125	50571200	39kΩ "
R107/R126	50571080	12kΩ "
R108/R127	50570840	1.2kΩ "
R109/R128	50571180	33kΩ "
R110/R129	50570840	1.2kΩ "
R111/R130	50570640	180Ω "
R112/R131	50571060	10kΩ "
R113/R132	50571000	5.6kΩ "
R114/R133	50571380	220kΩ "
R115/R134	50570840	1.2kΩ "
R116/R135	50571460	470kΩ "
R117/R136	50571320	120kΩ "
R118/R137	50571320	120kΩ "
R119/R138	50571260	68kΩ "
R139	50570740	470Ω "
R140/R150	50571540	1M "
R141/R151	50571100	15k "
R142/R152	50570820	1kΩ "
R143/R153	50573260	68kΩ "
R144/R154	50571040	8.2kΩ "
R145/R155	50571340	150kΩ "
R146/R156	50571190	36kΩ "
R147/R157	50570940	3.3kΩ "
R148/R158	50570540	68Ω "
R149/R159	50570820	1kΩ "
R160	50570660	220Ω "
R170/R171	50570920	2.7kΩ "
R172/R173	50571240	56kΩ "
		CAPACITORS
C101/C114	51700090	Tant. 10μF 16V
C102/C115	50555540	Elec. 47μF 10V
C103/C116	50547560	Dip. Mica 470pF 50V
C104/C117	50549700	Elec. 10μF 25V
C105/C118	50549740	" 100μF 25V
C106/C119	50554230	" 100μF 6.3V
C107/C120	50543820	Dip. Mica 22pF 50V
C108/C121	50547560	" 470pF 50V
C109/C122	50549700	Elec. 10μF 25V
C110/C123	50548480	Mylar 0.01μF 50V
C111/C124	50546701	Dip. Tant. 1μF 35V
C112/C125	50546701	" 1μF 35V
C113/C126	50546682	" 0.47μF 35V
C127	50554170	Elec. 100μF 25V
C128/C136	50548270	Mylar 0.047μF 50V
C129/C137	50547430	Dip. Mica 51pF 50V
C130/C138	50554900	Elec. 22μF 35V
C131/C139	50554050	" 10μF 16V
C132/C140	50547430	Dip. Mica 51pF 50V
C133/C141	50554040	Elec. 10μF 25V
C134/C142	50554040	" 10μF 25V
C135/C143	50554230	" 100μF 6.3V
C144	50554180	" 220μF 25V
		VARIABLE RESISTORS
VR101/103	50533580	Trimmer 6.8kΩ B
VR102/104	50533580	" 6.8kΩ B
		MISCELLANEOUS
J101/J102	50435000	Pin Jack

2. MIC/PLAYBACK EQ AMPLIFIER (A-6300)

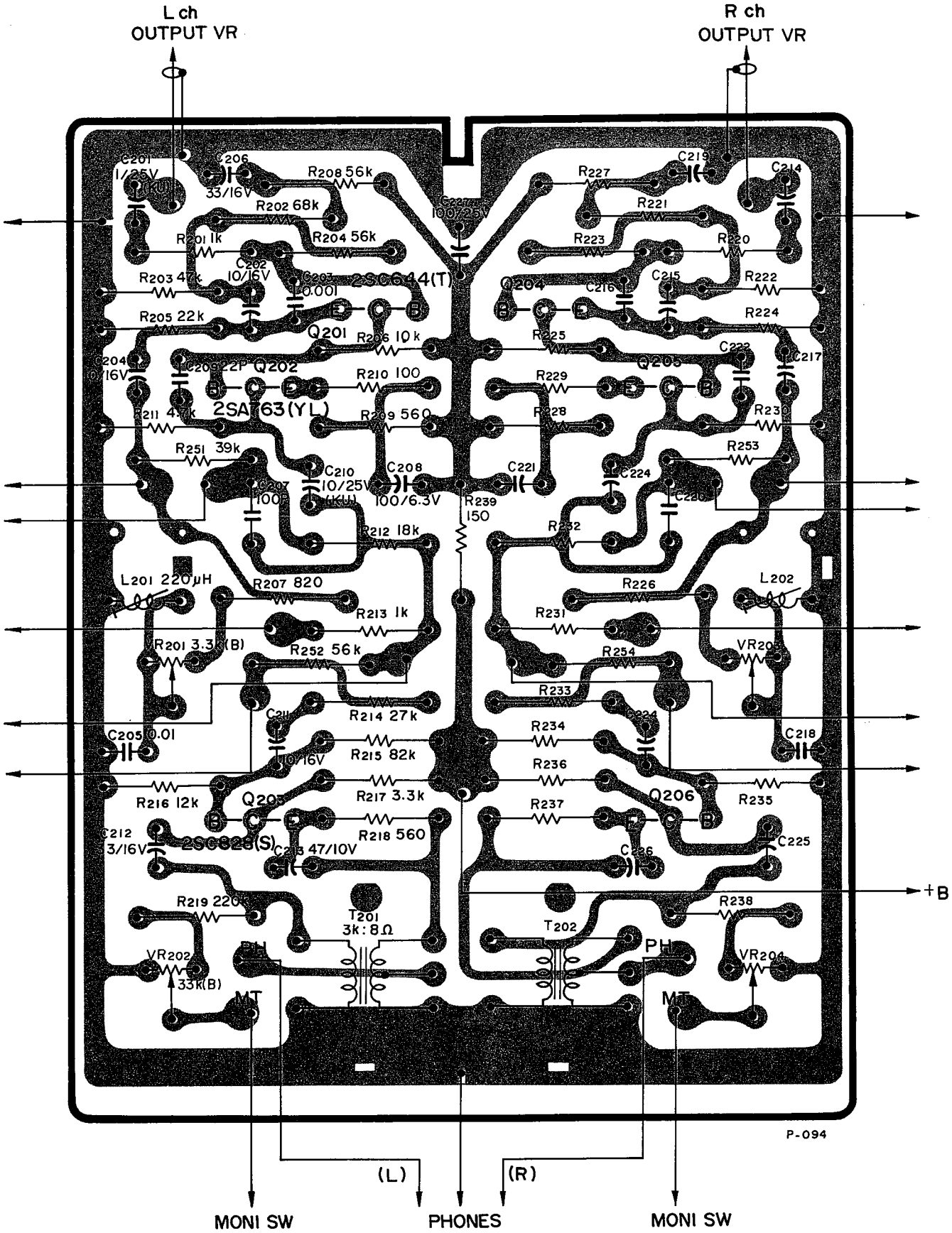


P-029-1

CIRCUIT REF. NO.	TEAC PARTS NO	DESCRIPTION
	51681351	PC Bd. Assy
	50484080	PC Bd.
		TRANSISTORS
Q101/Q104	50424710	2SC1345-E or F
Q102/Q105	50424870	2SA763-YL
Q103/Q106	50424600	2SC828-S
Q107/Q108	50424710	2SC1345-E or F
		CARBON RESISTORS
R101/R120	50573380	220kΩ 1/4W
R102/R121	50572820	1kΩ "
R103/R122	50573240	56kΩ "
R104/R123	50573240	56kΩ "
R105/R124	50573220	47kΩ "
R106/R125	50573200	39kΩ "
R107/R126	50573080	12kΩ "
R108/R127	50572740	470Ω "
R109/R128	50573180	33kΩ "
R110/R129	50572840	1.2kΩ "
R111/R130	50572640	180Ω "
R112/R131	50573080	10kΩ "
R113/R132	50573000	5.6kΩ "
R114/R133	50573380	220kΩ "
R115/R134	50572840	1.2kΩ "
R116/R135	50573380	220kΩ "
R117/R136	50573320	120kΩ "
R118/R137	50573320	120kΩ "
R119/R138	50573260	68kΩ "
R139	50572740	470Ω "
R140/R147	50572820	1kΩ "
R141/R148	50573400	270kΩ "
R142/R149	50573260	68kΩ "

CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION		
R143/R150	50573220	47kΩ "		
R144/R151	50572580	100Ω "		
R145/R152	50573080	12kΩ "		
R146/R153	50572820	1kΩ "		
R154	50572840	1.2kΩ "		
		CAPACITORS		
C101/C114	51700090	Tant.	10μF	16V
C102/C115	50555540	Elec.	47μF	10V
C103/C116	50547560	Dip. Mica	470pF	50V
C104/C117	50549700	Elec.	10μF	25V
C105/C118	50549740	"	100μF	25V
C106/C119	50554230	"	100μF	6.3V
C107/C120	50543820	Dip. Mica	22pF	50V
C108/C121	50547560	"	470pF	50V
C109/C122	50549700	Elec.	10μF	25V
C110/C123	50548420	Mylar	0.015μF	50V
C111/C124	50546701	Dip. Tant.	1μF	35V
C112/C125	50546701	"	1μF	35V
C113/C126	50546682	"	0.47μF	35V
C127	50554170	Elec.	100μF	25V
C128/C132	50554050	"	10μF	16V
C129/C133	50547560	Dip. Mica	470pF	50V
C130/C134	50555540	Elec.	47μF	10V
C131/C135	50554050	"	10μF	16V
C136	50554170	"	100μF	25V
		VARIABLE RESISTORS		
VR101/103	50533580	Trimmer	6.8k	B
VR102/104	50534140	"	15k	B
		MISCELLANEOUS		
J101/J102	50435000	Pin Jack		

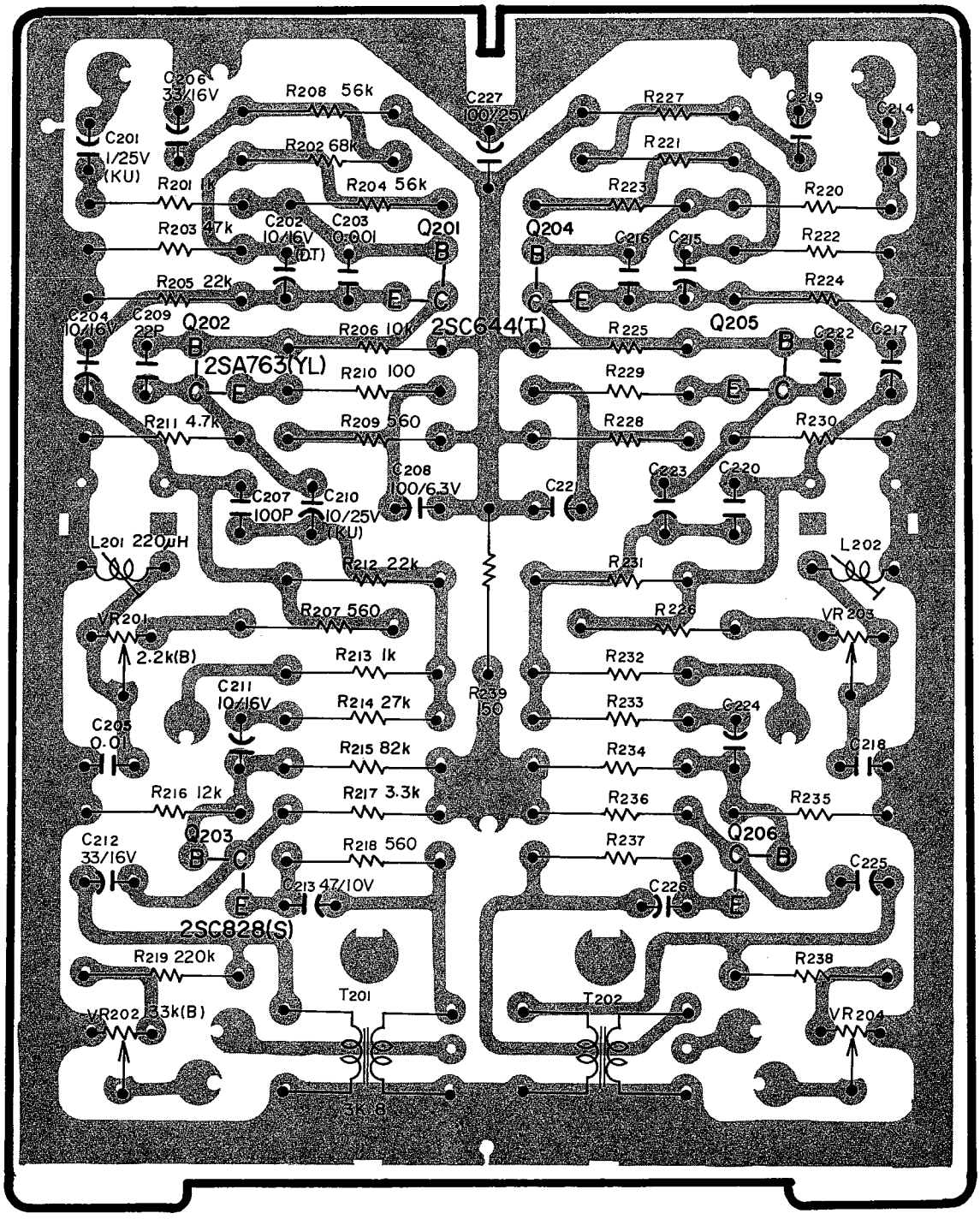
3. LINE OUT/PHONE AMPLIFIER (A-6100)



CIRCUIT REF. NO	TEAC PARTS NO	DESCRIPTION	
	51681080	PC Bd. Assy	
	51671080	PC Bd.	
		TRANSISTORS	
Q201/Q204	50423770	2SC644-T	
Q202/Q205	50424870	2SA763-YL	
Q203/Q206	50424600	2SC828-S	
		CARBON RESISTORS	
R201/R220	50572820	1kΩ	1/4W
R202/R221	50573260	68kΩ	"
R203/R222	50573220	47kΩ	"
R204/R223	50573260	56kΩ	"
R205/R224	50573140	22kΩ	"
R206/R225	50573060	10kΩ	"
R207/R226	50572800	820Ω	"
R208/R227	50573240	56kΩ	"
R209/R228	50572760	560Ω	"
R210/R229	50572580	100Ω	"
R211/R230	50572980	4.7kΩ	"
R212/R231	50573120	18kΩ	"
R213/R232	50572820	1kΩ	"
R214/R233	50573160	27kΩ	"
R215/R234	50573280	82kΩ	"
R216/R235	50573080	12kΩ	"
R217/R236	50572940	3.3kΩ	"
R218/R237	50572760	560Ω	"
R219/R238	50573380	220kΩ	"
R239	50570620	150Ω	"

CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION		
R251/R253	50573220	39kΩ	"	
R252/R254	50573240	56kΩ	"	
		CAPACITORS		
C201/C214	50549660	Elec.	1μF	25V
C202/C215	50546562	Dip. Tant.	10μF	16V
C203/C216	50548320	Mylar	0.01μF	50V
C204/C217	50554050	Elec.	10μF	16V
C205/C218	50548020	Mylar	0.001μF	50V
C206/C219	50554260	Elec.	33μF	16V
C207/C220	50547440	Dip. Mica	100pF	50V
C208/C221	50554230	Elec.	100μF	6.3V
C209/C222	50543820	Dip. Mica	22pF	50V
C210/C223	50549700	Elec.	10μF	25V
C211/C224	50554050	"	10μF	16V
C212/C225	50554260	"	33μF	16V
C213/C226	50555540	"	47μF	10V
C227	50554170	"	100μF	25V
		VARIABLE RESISTORS		
VR201/203	50533590	Trimmer	3.3kΩ	B
VR202/204	50534120	"	33kΩ	B
		COILS		
L201/L202	50566640	Coil, Choke	220μH	
		TRANSFORMERS		
T201/T202	50562141	3kΩ: 8Ω		

4. LINE OUT/PHONE AMPLIFIER (A-6300)

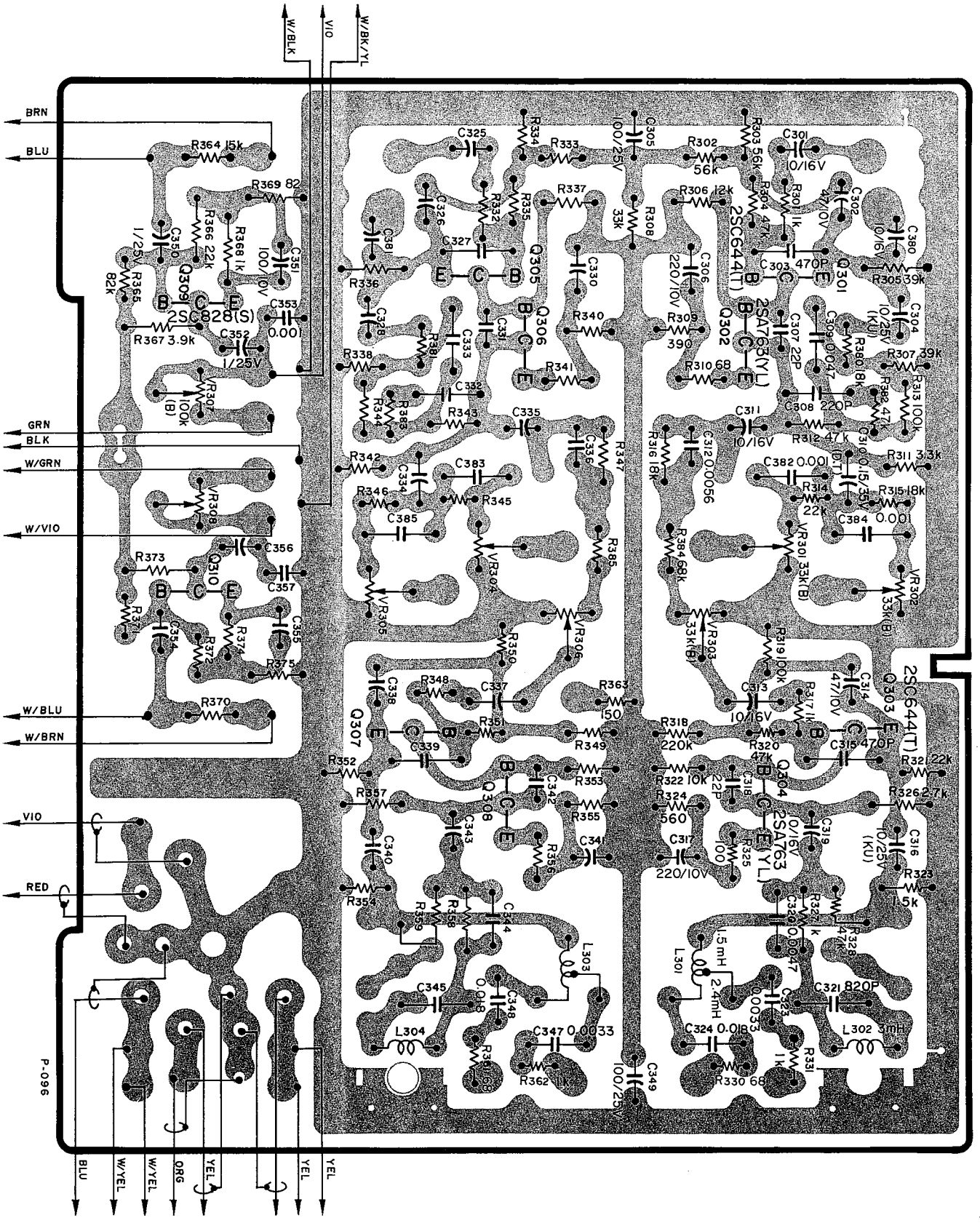


P-030-1

CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION	
	51681330	PC Bd. Assy	
	50484090	PC Bd.	
		TRANSISTORS	
Q201/Q204	50423770	2SC644-T	
Q202/Q205	50424870	2SA763-YL	
Q203/Q206	50424600	2SC828-S	
		CARBON RESISTORS	
R201/R220	50572820	1kΩ	1/4W
R202/R221	50573260	68kΩ	"
R203/R222	50573220	47kΩ	"
R204/R223	50573260	56kΩ	"
R205/R224	50573140	22kΩ	"
R206/R225	50573060	10kΩ	"
R207/R226	50572760	560Ω	"
R208/R227	50573240	56kΩ	"
R209/R228	50572760	560Ω	"
R210/R229	50572580	100Ω	"
R211/R230	50572980	4.7kΩ	"
R212/R231	50573140	22kΩ	"
R213/R232	50572820	1kΩ	"
R214/R233	50573160	27kΩ	"
R215/R234	50573280	82kΩ	"
R216/R235	50573080	12kΩ	"
R217/R236	50572940	3.3kΩ	"
R218/R237	50572760	560Ω	"
R219/R238	50573380	220kΩ	"
R239	50570620	150Ω	"

CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION		
		CAPACITORS		
C201/C214	50549660	Elec.	1μF	25V
C202/C215	50546562	Dip. Tant.	10μF	16V
C203/C216	50548320	Mylar	0.001μF	50V
C204/C217	50554050	Elec.	10μF	16V
C205/C218	50548020	Mylar	0.01μF	50V
C206/C219	50554260	Elec.	33μF	16V
C207/C220	50547440	Dip. Mica	100pF	50V
C208/C221	50554230	Elec.	100μF	6.3V
C209/C222	50543820	Dip. Mica	22pF	50V
C210/C223	50549700	Elec.	10μF	25V
C211/C224	50554050	"	10μF	16V
C212/C225	50554260	"	33μF	16V
C213/C226	50555540	"	47μF	10V
C227	50554170	"	100μF	25V
		VARIABLE RESISTORS		
VR201/203	50533640	Trimmer	2.2kΩ	B
VR202/204	50534120	"	33kΩ	B
		COILS		
L201/L202	50566640	Coil, Choke	220μH	
		TRANSFORMERS		
T201/T202	50562141	3kΩ: 8Ω		

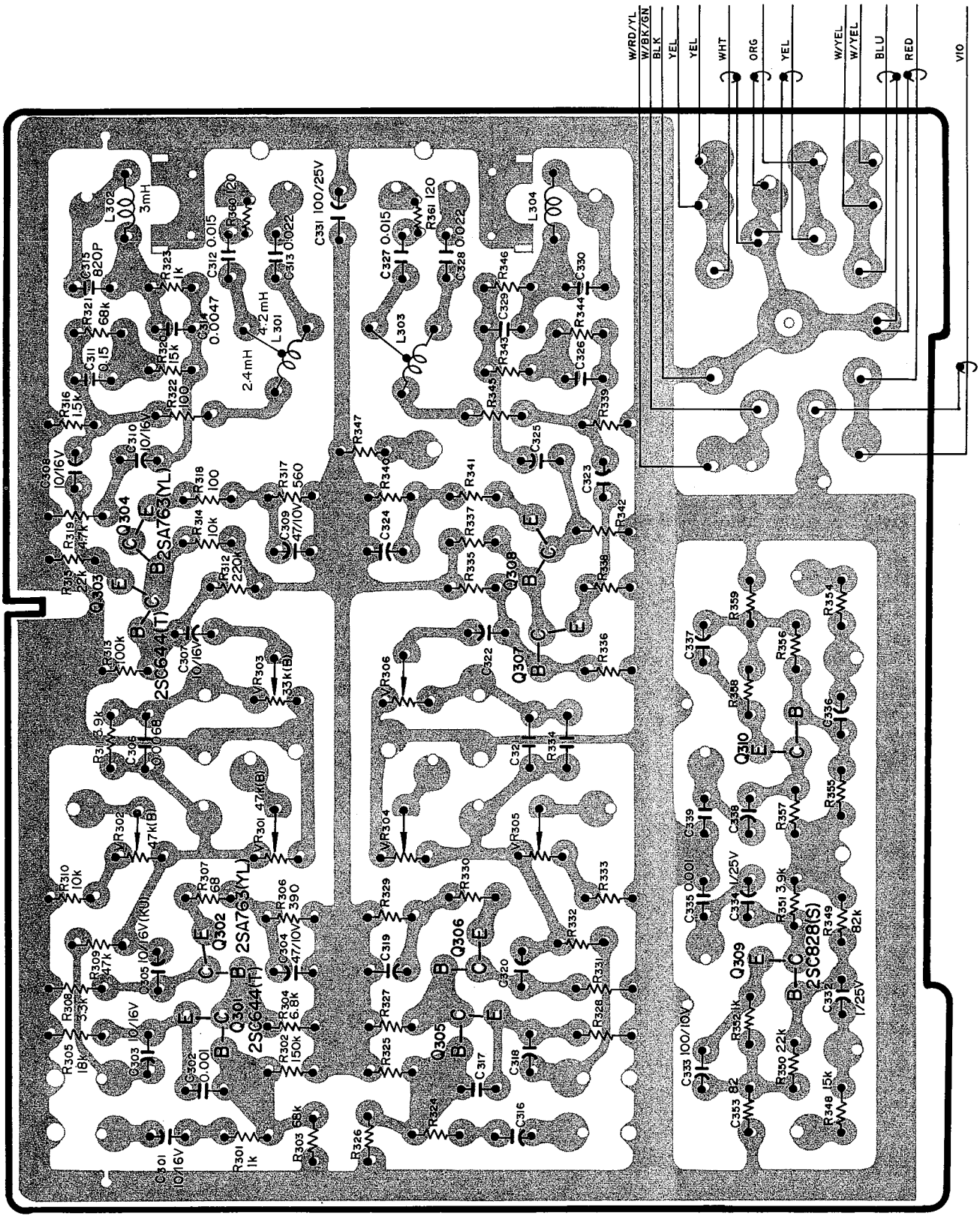
5. RECORD/METER AMPLIFIER (A-6100)



CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION	
	51681091	PC Bd. Assy	
	51671090	PC Bd.	
		TRANSISTORS	
Q301/Q305	50423770	2SC644-T	
Q302/Q306	50424870	2SA763-YL	
Q303/Q307	50423770	2SC644-T	
Q304/Q308	50424870	2SA763-YL	
Q309/Q310	50424820	2SC828-S	
		CARBON RESISTORS	
R301/R332	50570820	1kΩ	1/4W
R302/R333	50571240	56kΩ	"
R303/R334	50571240	56kΩ	"
R304/R335	50571220	47kΩ	"
R305/R336	50571200	39kΩ	"
R306/R337	50571080	12kΩ	"
R307/R338	50571220	39kΩ	"
R308	50571180	33kΩ	"
R309/R340	50570720	390Ω	"
R310/R341	50570540	68Ω	"
R311/R342	50570940	3.3kΩ	"
R312/R343	50571220	47kΩ	"
R313/R344	50571300	100kΩ	"
R314/R345	50571140	22kΩ	"
R315/R346	50571120	18kΩ	"
R316/R347	50571120	18kΩ	"
R317/R348	50570820	1kΩ	"
R318/R349	50571380	220kΩ	"
R319/R350	50571300	100kΩ	"
R320/R351	50571220	47kΩ	"
R321/R352	50571140	22kΩ	"
R322/R353	50571060	10kΩ	"
R323/R354	50570860	1.5kΩ	"
R324/R355	50572760	560Ω	"
R325/R356	50572580	100Ω	"
R326/R357	50570920	2.7kΩ	"
R327/R358	50570820	1kΩ	"
R328/R359	50571220	47kΩ	"
R330/R361	50570540	68Ω	"
R331/R362	50570820	1kΩ	"
R363	50570620	150Ω	"
R364/R370	50571100	15kΩ	"
R365/R371	50571280	82kΩ	"
R366/R372	50571140	22kΩ	"
R367/R373	50570960	3.9kΩ	"
R368/R374	50570820	1kΩ	"
R369/R375	50570560	82Ω	"

CIRCUIT REF. NO.	TEAC PART NO.	DESCRIPTION			
R380/R381	50571120	18kΩ	"		
R382/R383	50571220	47kΩ	"		
R384/R385	50571260	68kΩ	"		
		CAPACITORS			
C301/C325	50554050	Elec.	10μF	16V	
C302/C326	50555540	"	47μF	10V	
C303/C327	50547560	Dip. Mica	470pF	50V	
C304/C328	50549700	Elec.	10μF	25V	
C305	50554170	"	100μF	25V	
C306/C330	50554910	"	220μF	10V	
C307/C331	50543820	Dip. Mica	22pF	50V	
C308/C332	50547450	"	220pF		
C309/C333	50548270	Mylar	0.047μF	50V	
C310/C334	50546651	Dip. Tant.	0.15μF	35V	
C311/C335	50554050	Elec.	10μF	16V	
C312/C336	50548260	Mylar	0.0056μF	50V	
C313/C337	50554050	Elec.	10μF	16V	
C314/C338	50555540	"	47μF	10V	
C315/C339	50547560	Dip. Mica	470pF	50V	
C316/C340	50549700	Elec.	10μF	25V	
C317/C341	50554910	"	220μF	10V	
C318/C342	50543820	Dip. Mica	22pF	50V	
C319/C343	50554050	Elec.	10μF	16V	
C320/C344	50548131	Mylar	0.0047μF	50V	
C321/C345	50543440	Polyst.	820pF	50V	
C323/C347	50548810	Mylar	0.0033μF	50V	5%
C324/C348	50548970	"	0.018μF	50V	5%
C349	50554170	Elec.	100μF	25V	
C350/C354	50555470	"	1μF	25V	
C351/C355	50554570	"	100μF	10V	
C352/C356	50555470	"	1μF	25V	
C353/C357	50548320	Mylar	0.001μF	50V	
C380/C381	50554050	Elec.	10μF	16V	
C382/C383	50548780	Mylar	0.001μF		5%
C384/C385	50548780	"	0.001μF		5%
		VARIABLE RESISTORS			
VR301/304	50534120	Trimmer	33kΩ	B	
VR302/305	50534120	"	"	"	
VR303/306	50534120	"	"	"	
VR307/308	50533490	"	100kΩ	"	
		COILS			
L301/L303	50566670	Record EQ	1.5-2.4mH		
L302/L304	50566300	Trap	3mH		

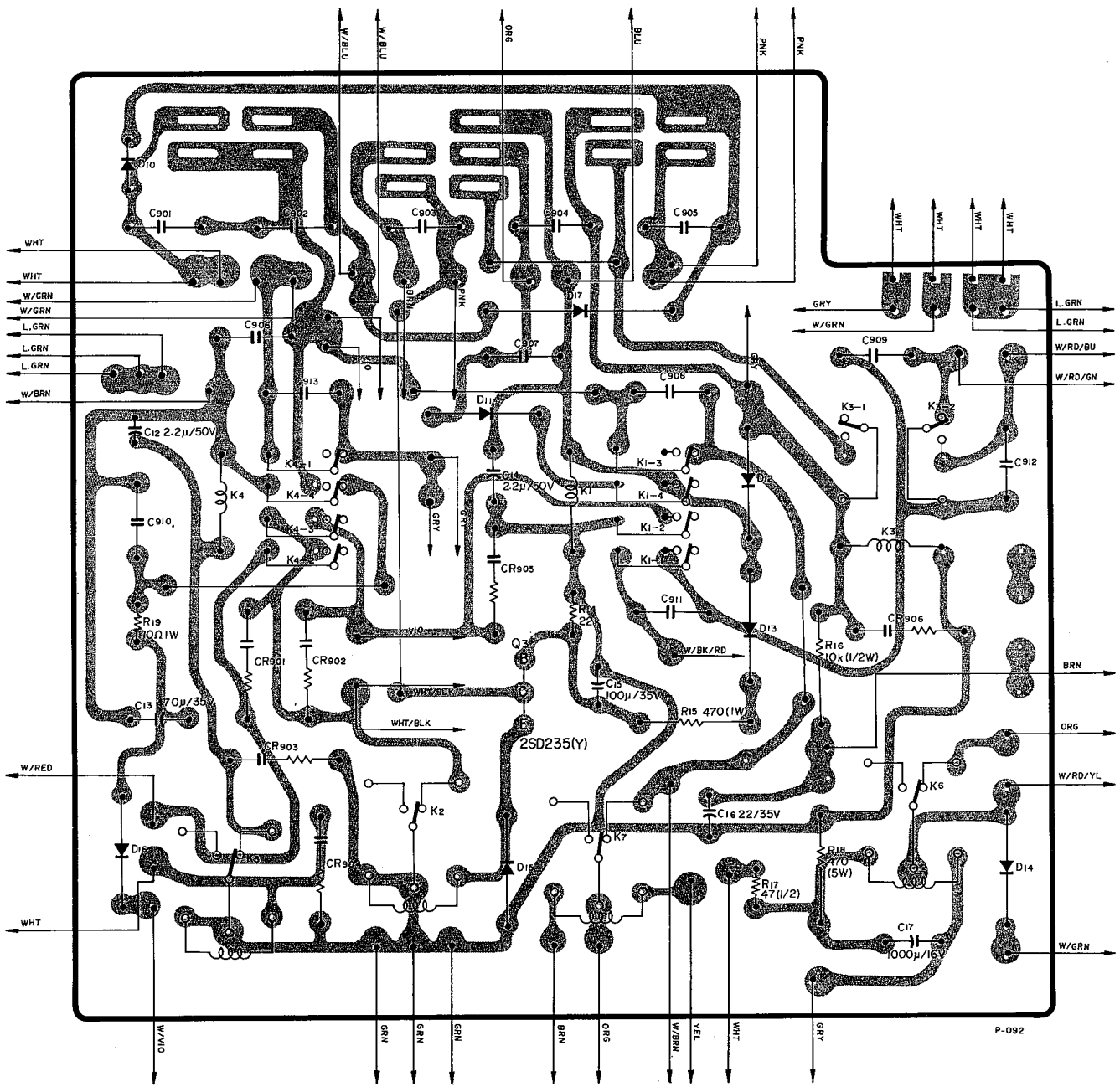
6. RECORD/METER AMPLIFIER (A-6300)



CIRCUIT REF. NO	TEAC PARTS NO	DESCRIPTION	
	51681361	PC Bd. Assy	
	50484401	PC Bd.	
		TRANSISTORS	
Q301/Q305	50423770	2SC644-T	
Q302/Q306	50424870	2SA763-YL	
Q303/Q307	50423770	2SC644-T	
Q304/Q308	50424870	2SA763-YL	
Q309/Q310	50424820	2SC828-S	
		CARBON RESISTORS	
R301/R324	50570820	1kΩ	1/4W
R302/R325	50571340	150kΩ	"
R303/R326	50571260	68kΩ	"
R304/R327	50571020	6.8kΩ	"
R305/R328	50571120	18kΩ	"
R306/R329	50570720	390Ω	"
R307/R330	50570540	68Ω	"
R308/R331	50570940	3.3kΩ	"
R309/R332	50571220	47kΩ	"
R310/R333	50571060	10kΩ	"
R311/R334	50570960	3.9kΩ	"
R312/R335	50571380	220kΩ	"
R313/R336	50571300	100kΩ	"
R314/R337	50571060	10kΩ	"
R315/R338	50571140	22kΩ	"
R316/R339	50570860	1.5kΩ	"
R317/R340	50570760	560Ω	"
R318/R341	50570580	100Ω	"
R319/R342	50570980	4.7kΩ	"
R320/R343	50571100	15kΩ	"
R321/R344	50571260	68kΩ	"
R322/R345	50570580	100Ω	"
R323/R346	50570820	1kΩ	"
R347	50570620	150Ω	"
R348/R354	50571100	15kΩ	"

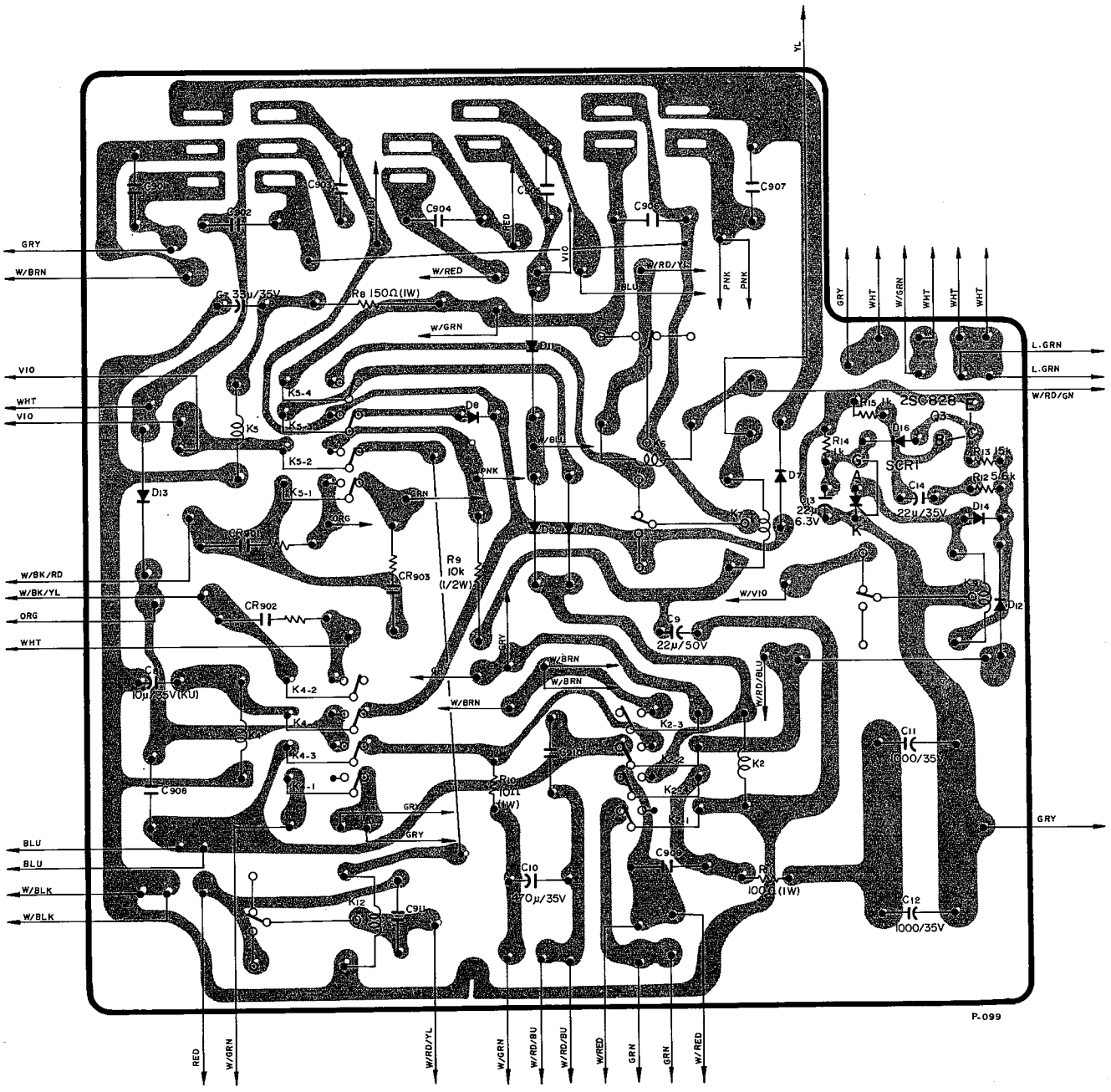
CIRCUIT REF. NO.	TEAC PARTS NO	DESCRIPTION	
R349/R355	50571280	82kΩ	"
R350/R356	50571140	22kΩ	"
R351/R357	50570960	3.9kΩ	"
R352/R358	50570820	1kΩ	"
R353/R359	50570560	82Ω	"
R360/R361	50570600	120Ω	"
		CAPACITORS	
C301/C316	50554050	Elec.	10μF 16V
C302/C317	50548320	Mylar	0.001μF 50V
C303/C318	50554050	Elec.	10μF 16V
C304/C319	50555540	"	47μF 10V
C305/C320	50549770	"	10μF 16V
C306/C321	50548540	Mylar	0.0068μF 50V
C307/C322	50554050	Elec.	10μF 16V
C308/C323	50554050	"	10μF 16V
C309/C324	50555540	"	47μF 10V
C310/C325	50554050	"	10μF 16V
C311/C326	50548310	Mylar	0.15μF 50V
C312/C327	50548420	"	0.015μF 50V
C313/C328	50548290	"	0.022μF 50V
C314/C329	50548131	"	0.0047μF 50V
C315/C330	50543440	Polyst.	820pF 50V
C331	50554170	Elec.	100μF 25V
C332/C336	50555470	"	1μF 25V
C333/C337	50554570	"	100μF 10V
C334/C338	50555470	"	1μF 25V
C335/C339	50548321	Mylar	0.001μF 50V
		VARIABLE RESISTORS	
VR301/304	50533520	Trimmer	47kΩ B
VR302/305	50533520	"	47kΩ B
VR303/306	50534120	"	33kΩ B
		COILS	
L301/L303	50566370	Record EQ	2.4-4.2mH
L302/L304	50566300	Trap	3mH

7. CONTROL RELAY (A-6100)



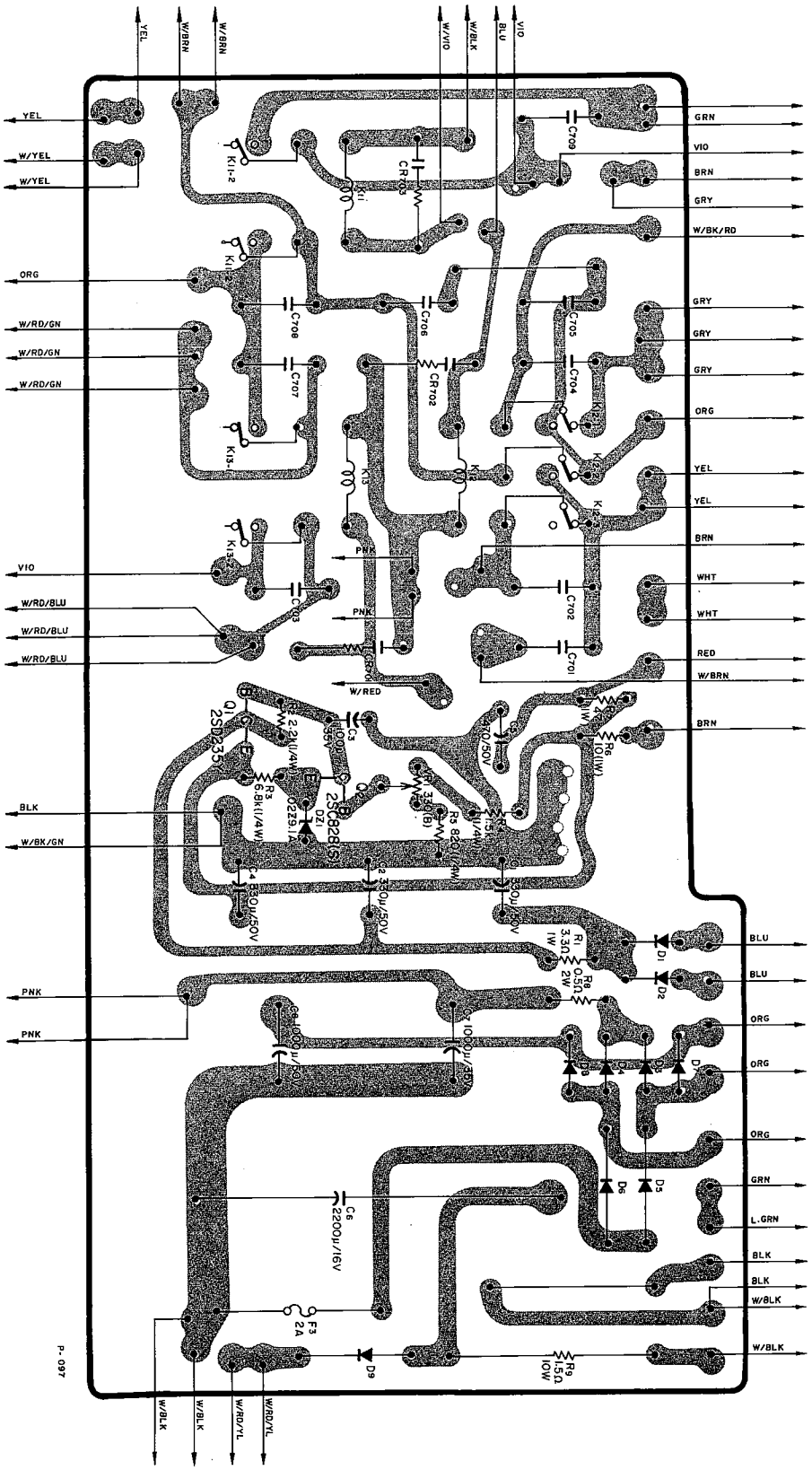
CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION				REMARKS
	51681051	PC Bd.				
	51671051	PC Bd.				
		SEMICONDUCTORS				
Q3	50424620	Transistor,	2SD235-Y			
D10-D13	50422560	Diode,	S1B01-02			
D14	50422570	"	S1B01-06			
D15-D17	50422560	"	S1B01-02			
		RELAYS				
K1•K4	50611180	DC 24V	4PDT			
K2•K7	50611170	"	SPDT			
K3	50611140	"	DPDT			
K5	50611150	"	SPDT			
K6	50611130	DC 12V	SPDT			
		RESISTORS				
R14	50575140	Carbon		22kΩ	1/2W	5%
R15	50575040	"		470Ω	"	"
R16	50575060	"		10kΩ	"	"
R17	50574260	"		47Ω	"	"
R18	50527140	Metal Oxide Film,		470Ω	3W	
R19	50526120	Wire Wound,		10Ω	1W	
		CAPACITORS				
C12•C14	50554980	Elec.		2.2μF		50V
C13	50554620	"		470μF		35V
C15	51700070	"		100μF		35V
C16	51700580	"		22μF		50V
C17	50554890	"		1000μF		16V
C901-913	50549920	Metalized Mylar		0.1μF		400V
CR901-906	50529050	Spark Killer		0.1μF + 120Ω		400V
		MISCELLANEOUS				
J3	50436590	Connector,	28P	(Plug)		
	50436600	"	"	(Socket)		
	50436530	"	15P	(Plug)		
	50438310	"	"	(Socket)		
	50436680	"	3P	(Plug)		
	50436690	"	"	(Socket)		

8. CONTROL RELAY (A-6300)



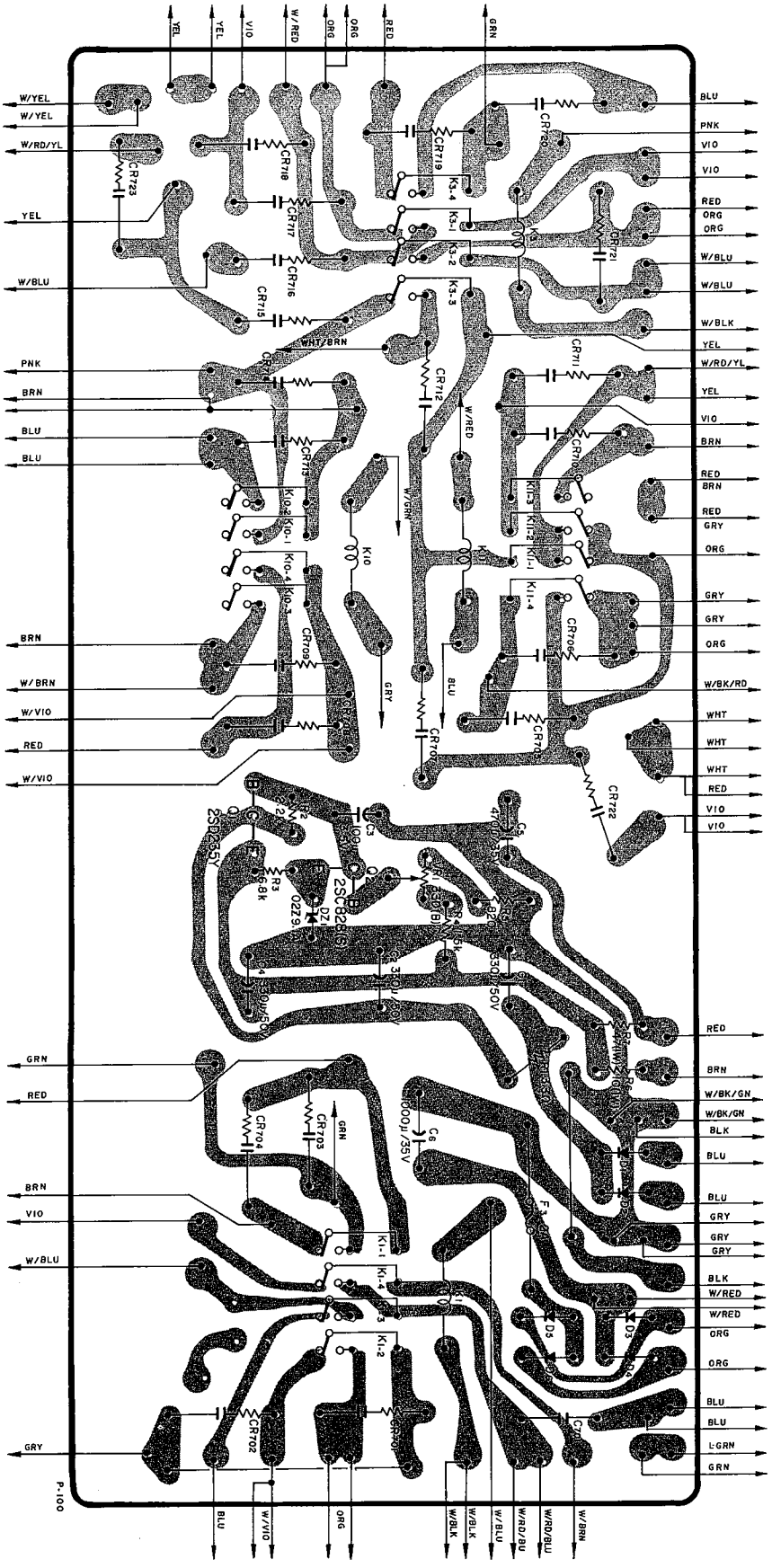
CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION			REMARKS
	51681011	PC Bd. Assy, Control Relay			
	51671011	PC Bd., Control Relay			
		SEMICONDUCTORS			
Q3	50424600	Transistor,	2SC828-S		
D7-D12•D16	50422560	Diode,	S1B01-02		
D13	50422970	"	SR3AM-6		
D14	50422560	"	S1B01-02		
SCR1	50428040	Thyristor,	FOR2B41		
		RELAYS			
K2•K4•K5	50611180	DC 24V	4PDT		
K6•K9•K12	50611150	"	SPDT		
K7	50611170	"	SPDT		
		RESISTORS			
R8	50526280	Wire Wound	150Ω	1W	
R9	50575060	Carbon	10kΩ	1/2W	
R10	50526120	Wire Wound	10Ω	1W	
R11	50525320	"	100Ω	"	
R12	50515460	Carbon	5.6kΩ	1/4W	
R13	50571000	"	15kΩ	"	
R14•R15	50515340	"	1kΩ	"	
		CAPACITORS			
C7	50554750	Elec.	33μF	35V	
C8	50555690	"	10μF	35V	
C9	51700580	"	22μF	50V	
C10	50554620	"	470μF	35V	
C11•C12	50551380	"	1000μF	35V	
C13	50554850	"	22μF	6.3V	
C14	50554900	"	22μF	35V	
C901-911	50549920	Metalized Mylar	0.1μF	400V	
CR901-903	50529050	Spark Killer	0.1μF + 120Ω	400V	
		MISCELLANEOUS			
J3	50436590	Connector,	28P	(Plug)	
	50436600	"	"	(Socket)	
	50436530	"	15P	(Plug)	
	50438310	"	"	(Socket)	
	50436660	"	5P	(Plug)	
	50436670	"	"	(Socket)	

9. POWER SUPPLY (A-6100)



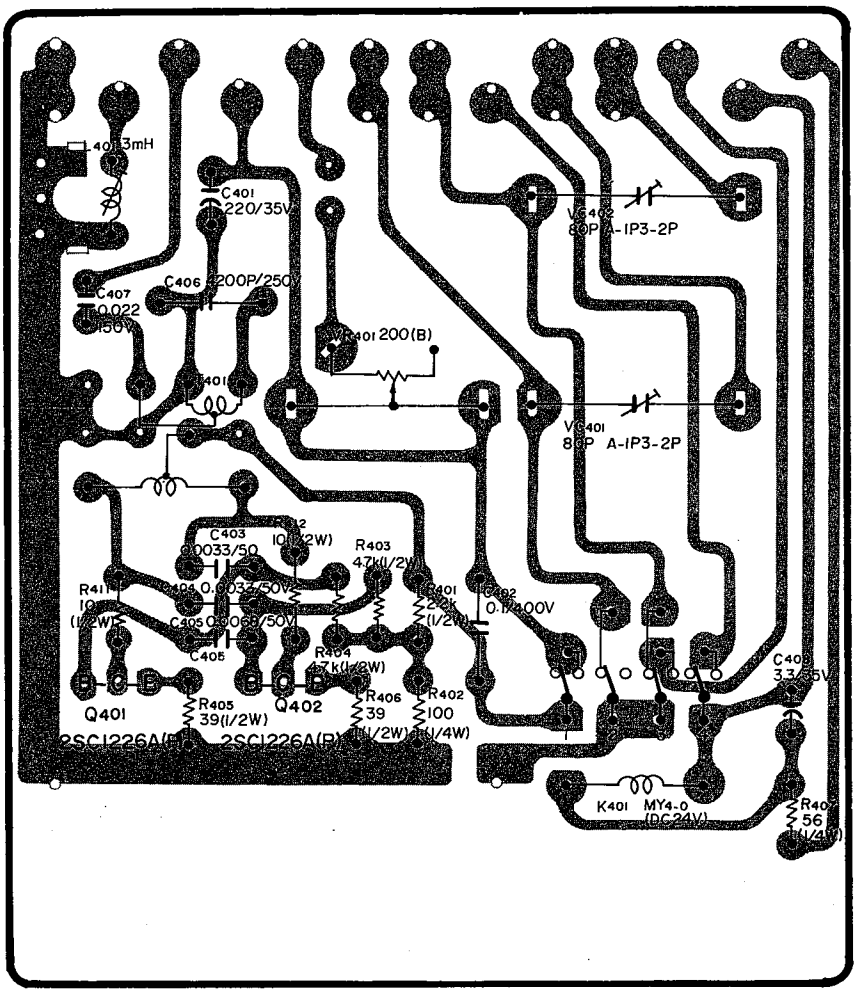
CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION			REMARKS
	51681062	PC Bd. Assy			
	51671061	PC Bd.			
	55505300	Heat Sink			
	50332910	Sheet, Insulating			
	50332950	Tube, Insulating			
F3	50411360	Fuse, 2A			
	SEMICONDUCTORS				
Q1	50424620	Transistor,	2SD235-Y		
Q2	50424820	"	2SC828-S		
D1-D8	50422560	Diode,	SIB01-02		
D9	50422570	"	SIB01-06		
DZ1	50422980	Diode, Zener;	02Z9-1A		
	RELAYS				
K11·K13	50611140	DC 24V, 3PDT			
K12	50611120	" DPDT			
	RESISTORS				
R1	50525440	Wire Wound	3.3Ω	1W	
R2	50515380	Carbon	2.2kΩ		
R3	50515470	"	6.8kΩ		
R4	50515360	"	1.5kΩ		
R5	50515330	"	820Ω		
R6	50526120	Wire Wound	10Ω	1W	
R7	50526270	"	47Ω	"	
R8	50526150	"	0.5Ω	2W	
R9	50520340	Cement	1.5Ω	3W	
	CAPACITORS				
C1·C2·C4	50554990	Elec.	330μF	50V	
C3	50554630	"	100μF	35V	
C5	50554620	"	470μF	35V	
C6	50555660	"	2200μF	16V	
C7·C8	50551380	"	1000μF	35V	
C701-709	50549920	Metalized Mylar	0.1μF	400V	
CR701-703	50529050	Spark Killer	0.1μF + 120Ω	400V	
	VARIABLE RESISTOR				
VR1	50533760	Trimmer	330Ω B		

10. POWER SUPPLY (A-6300)



CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION		REMARKS
	51691022	PC Bd. Assy, Power Supply		
	51671021	PC Bd. Power Supply		
	55505300	Heat Sink		
	50332910	Sheet, Insulating		
	50332950	Tube, Insulating		
F3	50411360	Fuse, 2A		
		SEMICONDUCTORS		
Q1	50424620	Transistor,	2SD235-Y	
Q2	50424820	"	2SC828-S	
D1-D6	50422560	Diode,	SIB01-02	
DZ1	50422980	Diode, Zener;	02Z9-1A	
		RELAYS		
K1•K3•K10	50611180	DC 24V, 4PDT		
K11	50611180	" 4PDT		
		RESISTORS		
R1	50525440	Wire Wound	3.3Ω 1W	
R2	50515380	Carbon	2.2kΩ	
R3	50515470	"	6.8kΩ	
R4	50515360	"	1.5kΩ	
R5	50515330	"	820Ω	
R6	50526120	Wire Wound	10Ω 1W	
R7	50526270	"	47Ω "	
		CAPACITORS		
C1•C2•C4	50554990	Elec.	330μF 50V	
C3	50554630	"	100μF 35V	
C5	50554620	"	470μF 35V	
C6	50551380	"	1000μF 35V	
C701	50549920	Metalized Mylar	0.1μ 400V	
CR701-723	50529050	Spark Killer	0.1μF + 120Ω 400V	
		VARIABLE RESISTOR		
VR1	50533760	Trimmer	330Ω B	

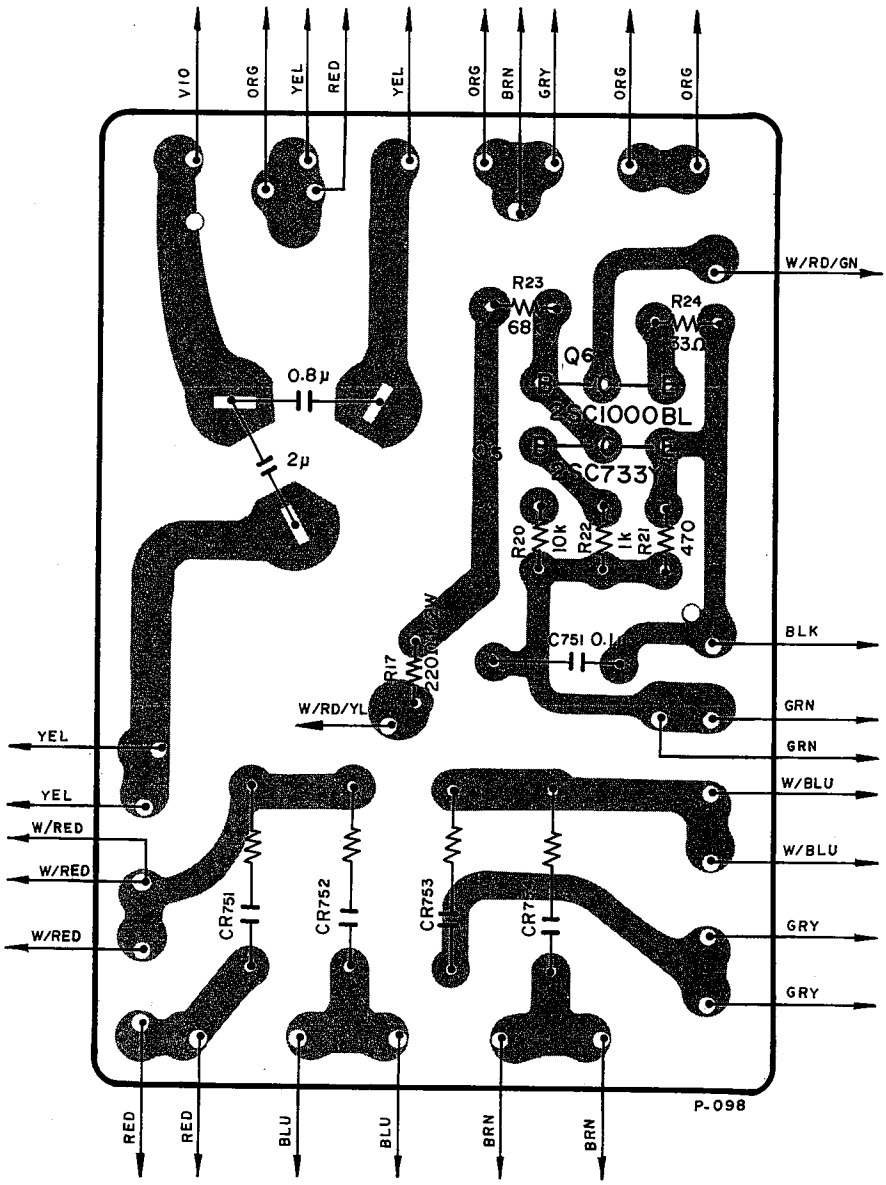
11. BIAS OSCILLATOR



CIRCUIT REF. NO.	TEAC PART NO.	DESCRIPTION		
	51681341	PC Bd. Assy		
	50484413	PC Bd.		
		TRANSISTORS		
Q401/Q402	50424450	2SC1226A-P		
		RELAY		
K401	50611180	DC 24V, 4PDT		
		CARBON RESISTORS		
R401	50514920	2.2kΩ	1/2W	
R402	50515210	100Ω	1/4W	
R403/R404	50574900	2.2kΩ	1/2W	
R405/R406	50574480	39Ω	"	
R407	50515190	56Ω	1/4W	
R411/R412	50570340	10Ω	"	
		CAPACITORS		
C401	50554380	Elec.	220μF	35V

CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION			
C402	50549920	Mylar	0.1μF	400V	
C403	50548810	"	0.0033μF	50V	
C404	50548810	"	0.0033μF	50V	
C405	50548930	"	0.0068μF	50V	5%
C406	50544040	Mica.	4200pF	250V	
C407	50548740	Mylar	0.022μF	150V	
C408	50555000	Elec.	3.3μF	35V	
		VARIABLE RESISTOR			
VR401	50539020	Trimmer 200Ω B			
		TRIMMER CAPACITORS			
VC401/402	50547070	MAX. 80pF			
		COILS			
T401	50563170	Coil, Bias Osc.			
L401	50566581	Coil, Dummy 3mH			
		MISCELLANEOUS			
	50330930	Sheet, Insulating			
	50330940	Tube, Insulating			

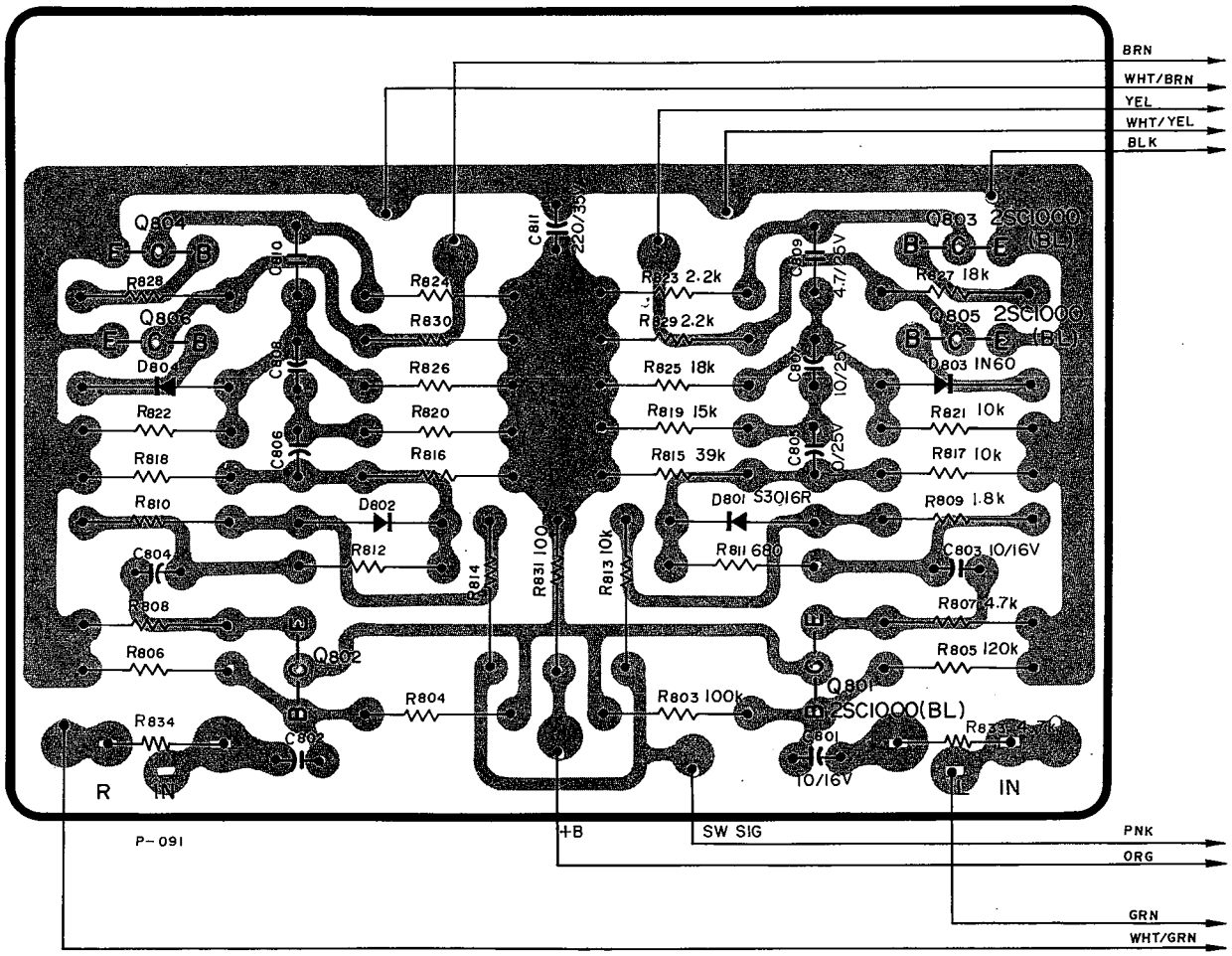
12. TERMINAL PC BOARD



CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION	
	51681030	PC Bd. Assy	(A-6300)
	51681040	"	(A-6100)
	51671030	PC Bd.	(A-6100/A-6300)
		TRANSISTORS	
Q5	50423510	2SC733-Y	(A-6300)
Q6	50424340	2SC1000-BL	(")
		CARBON RESISTORS	
R17	50574660	220Ω 1/2W	(A-6300)

CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION	
R20	50515490	10kΩ	1/4W
R21	50515300	470Ω	"
R22	50515340	1kΩ	"
R23	50515620	68kΩ	"
R24	50515170	33Ω	"
		CAPACITORS	
C751	50549920	Metalized Mylar 0.1μF 400V	(A-6300)
CR751-754	50529050	Spark Killer 0.1μF + 120Ω 400V	(A-6100/A-6300)

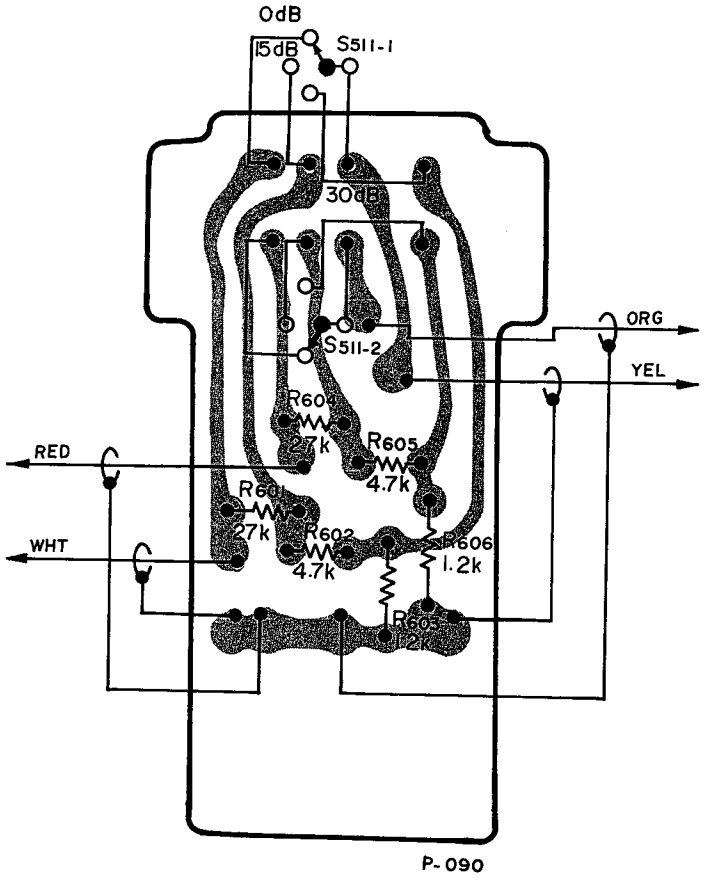
13. PEAK LEVEL INDICATOR AMPL.



CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION	
	51681371	PC Bd. Assy	
	51671100	PC Bd.	
		TRANSISTORS	
Q801/Q802	50424340	2SC1000-BL	
Q803/Q804	"	"	
Q805/Q806	"	"	
		DIODES	
D801/D802	50422440	S3016R	
D803/D804	50422130	1N60	
		CARBON RESISTORS	
R803/R804	50573300	100kΩ	1/4W
R805/R806	50573320	120kΩ	"
R807/R808	50572980	4.7kΩ	"
R809/R810	50572880	1.8kΩ	"

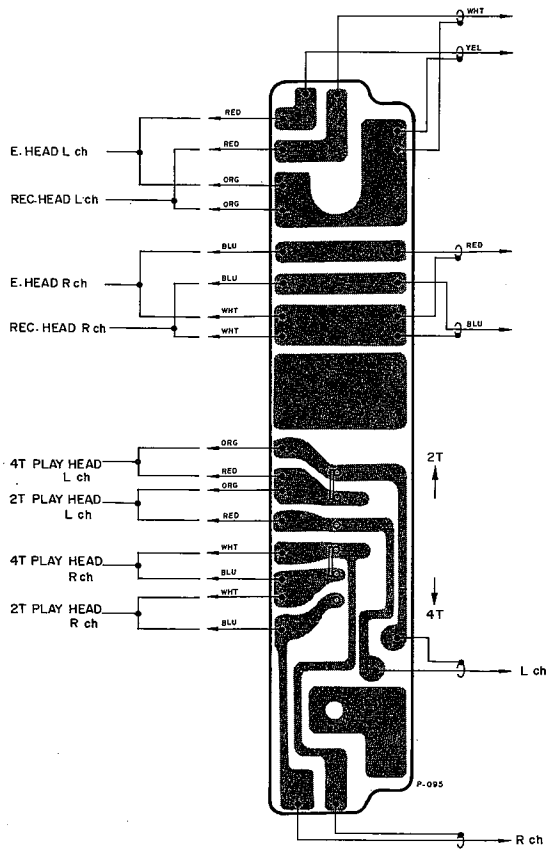
CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION	
R811/R812	50572780	680Ω	"
R813/R814	50573060	10kΩ	"
R815/R816	50573200	39kΩ	"
R817/R818	50573060	10kΩ	"
R819/R820	50573100	15kΩ	"
R821/R822	50573060	10kΩ	"
R823/R824	50572900	2.2kΩ	"
R825/R826	50573120	18kΩ	"
R827/R828	50573120	18kΩ	"
R829/R830	50572900	2.2kΩ	"
R831	50572580	100Ω	"
R833/R834	50572980	4.7kΩ	"
		CAPACITORS	
C801/C802	50554050	Elec.	10μF 16V
C803/C804	50554050	"	10μF 16V
C805/C806	50554040	"	10μF 25V
C807/C808	50554040	"	10μF 25V
C809/C810	50559090	Bi-polar	4.7μF 25V
C811	50554380	Elec.	220μF 35V

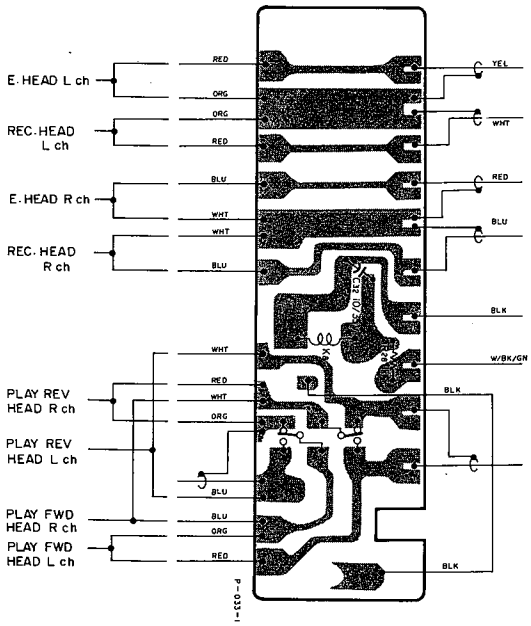
14. MIC ATTENUATOR



CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION	REMARKS
	51681110	PC Bd. Assy	
	51671110	PC Bd.	
		CARBON RESISTORS	
R601/R604	50571160	27kΩ 1/4W	
R602/R605	50570980	4.7kΩ "	
R603/R606	50570840	1.2kΩ "	

15. HEAD PC BOARD

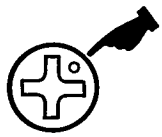




CIRCUIT REF. NO.	TEAC PARTS NO.	DESCRIPTION		REMARKS
	51681380	PC Bd. Assy	(A-6300)	
	51681390	PC Bd. Assy	(A-6100)	
	50483080	PC Bd.	(A-6300)	
	51671120	PC Bd.	(A-6100)	
	50444720	SW, Slide	"	
K8	50611210	Relay, Head Selector	(A-6300)	
R28	50515340	Carbon 1kΩ 1/4W	"	
C32	50554510	Elec. 10μF 35V	"	

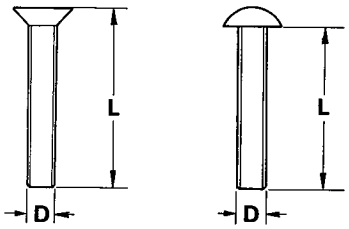
HARDWARE NOMENCLATURE

All screws conform to **ISO** standards, and have cross-recessed heads, unless otherwise noted.
ISO screws have the head inscribed with a point as in the figure to the right.



FOR EXAMPLE:

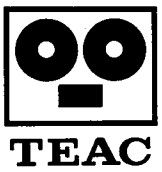
B M3 x 6
- Length in mm (L)
- Diameter in mm (D)
- Type of Head



	Abbreviation	*Full Name*	*Type*
MACHINE SCREW	**R**	Round Head Screw	
	P	Pan Head Screw	
	T	Stove Head Screw (Truss)	
	B	Binding Head Screw	
	F	Flat Countersunk Head Screw	
	O	Oval Countersunk Head Screw	
WOOD SCREW	**RW**	Round Head Wood Screw	
	FW	Flat Countersunk Wood Screw	
	OW	Oval Countersunk Wood Screw	
SEMS SCREW	**BSA**	Binding Head SEMS Screw(A Type)	
	BSB	Binding Head SEMS Screw(B Type)	
	BSF	Binding Head SEMS Screw(F Type)	
	PSA	Pan Head SEMS Screw(A Type)	
	PSB	Pan Head SEMS Screw(B Type)	

	Abbreviation	*Full Name*	*Type*
TAPPING SCREW	**BTA**	Binding Head Tapping Screw(A Type)	
	BTB	Binding Head Tapping Screw(B Type)	
	RTA	Round Head Tapping Screw(A Type)	
	RTB	Round Head Tapping Screw(B Type)	
SETSCREW	**SF**	Hex Socket Setscrew(Flat Point)	
	SC	Hex Socket Setscrew(Cup Point)	
	SS	Slotted Socket Setscrew(Flat Point)	
WASHER	**E**	E-Ring (Retaining Washer)	
	W	Flat Washer (Plain)	
	SW	Lock Washer (Spring)	
	LWI	Lock Washer (Internal Teeth)	
	LWE	Lock Washer (External Teeth)	
	TW	Trim Washer (Countersunk)	
NUT	**N**	Hex Nut	

T-310



TEAC CORPORATION 3-7-3 NAKA-CHO, MUSASHINO, TOKYO PHONE: (0422) 53-1111

TEAC CORPORATION OF AMERICA 7733 TELEGRAPH ROAD, MONTEBELLO, CALIFORNIA 90640 PHONE: (213) 726-0303

PRINTED IN JAPAN 0478 SYU 0.4

CIRCUIT REF.NO.	DESCRIPTION
VR101/103	Playback EQ(38cm/s)
VR102/104	Playback EQ(19cm/s)
VR201/203	Playback Level Adj.
VR202/204	Meter Level Adj.(Play)
VR302/305	Meter Level Adj.(Source)
VR303/306	Record Level Adj.
VR307/308	Peak Lamp Level Adj.
VC401/402	Bias Adj.(1)
VR401	Bias Adj.(2)
L201/202	Bias Trap
L301/303	Record EQ
L302/304	Bias Trap
L401	Dummy.C011

CIRCUIT REF.NO.	DESCRIPTION	CIRCUIT REF.NO.	DESCRIPTION
Q101/104	2SC1345(Ebrs)	Q301/305	2SC644(T)
Q102/105	2SA763(YL)-S	Q302/306	2SA763(YL)-S
Q103/106	2SC828(S)	Q303/307	2SC644(T)
Q107/109	2SK30 (Y)	Q304/308	2SA763(YL)-S
Q108/110	2SC1000(GR)	Q309/310	2SC828(S)
Q201/204	2SC644(T)	Q401/402	2SC1226(A)
Q202/205	2SA763(YL)-S	Q801/802	2SC1000(BL)
Q203/206	2SC828(S)	Q803/804	2SC1000(BL)
		Q805/806	2SC1000(BL)

NOTES

Schematic diagram shown in the PLAYBACK mode
All resistors values in ohms,1/4 watt,K=1,000 ohms
All capacitors values in microfarads
: Screwdriver adjustment
MONITOR Switch shown in the TAPE position
: on front panel : on rear panel
TAPE SPEED switch shown in the HIGH position

REVISION	DATE	CHANGE NO.
1	6 - 74	
2	-	
3	-	
4	-	
5	-	
6	-	

TEAC CORPORATION

PREAMPLIFIER

MODEL NO. A-6100 SHEET NO.

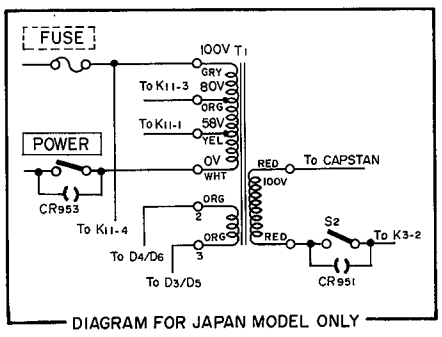
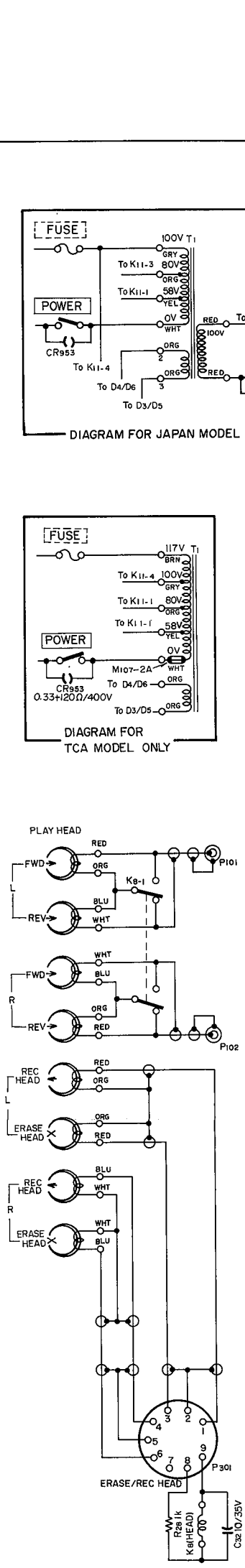
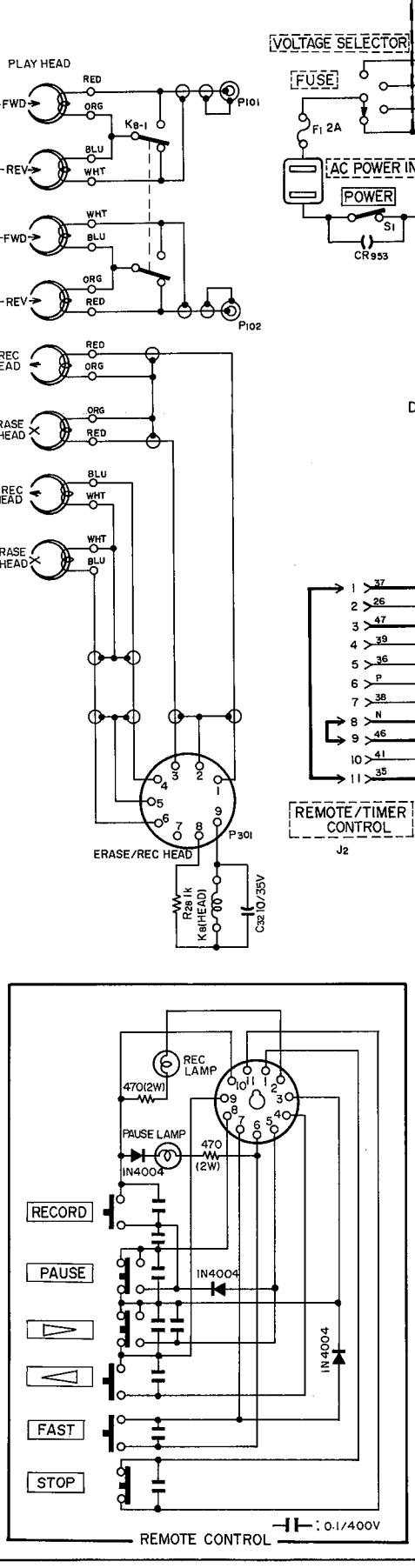


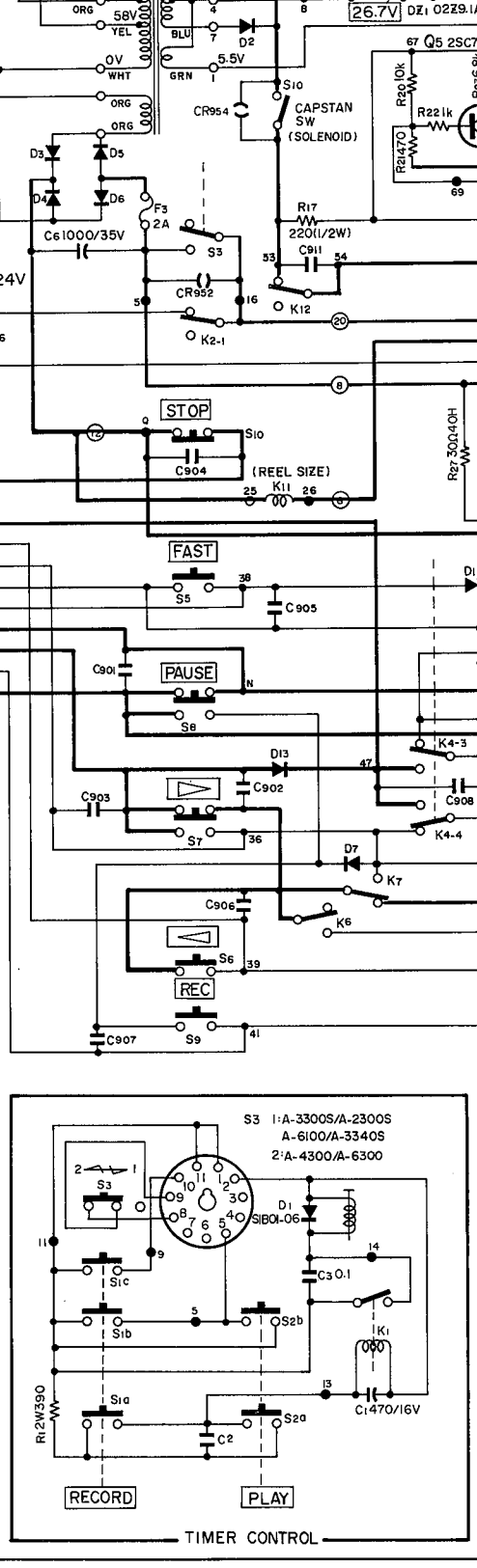
DIAGRAM FOR JAPAN MODEL ONLY

DIAGRAM FOR TCA MODEL ONLY





REMOTE CONTROL



TIMER CONTROL

NOTES

Frequency Conversion switch shown in the 60 Hz position
All relays shown in STOP mode (de-energized)

——— : Indicates DC supply voltage
– – – – – : Indicates AC supply voltage

REVISION	DATE	CHANGE NO.
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4	·	
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2	·	
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TAPE TRANSPORT

MODEL NO. A-6300

SHEET NO.

TEAC CORPORATION

CIRCUIT REF.No.	DESCRIPTION
VR101/103	Playback EQ(19cm/s)
VR102/104	Playback EQ(9.5cm/s)
VR201/203	Playback Level Adj.
VR202/204	Meter Level Adj.(Play)
VR301/304	Source Level Adj.
VR302/305	Meter Level Adj.(Source)
VR303/306	Record Level Adj.
VC401/402	Bias Adj.(1)
VR401	Bias Adj.(2)
L201/202	Bias Trap
L301/303	Record EQ
L302/304	Bias Trap
L401	Dummy Coil

CIRCUIT REF.No.	DESCRIPTION	CIRCUIT REF.No.	DESCRIPTION
Q101/104	2SC1345(E)	Q301/305	2SC644(T)
Q102/105	2SA763(YL)-5	Q302/306	2SA763(YL)-5
Q103/106	2SC828(S)	Q303/307	2SC644(T)
Q107/108	2SC1345(EorF)	Q304/308	2SA763(YL)-5
Q201/204	2SC644(T)	Q309/310	2SC828(S)
Q202/205	2SA763(YL)-5	Q401/402	2SC1226A(P)
Q203/206	2SC828(S)		

NOTES

Schematic diagram shown in the PLAYBACK mode
All resistors values in ohms,1/4 watt,k=1,000 ohms
All capacitors values in microfarads
● : Screwdriver adjustment
□ : on front panel [ ] : on rear panel
MONITOR Switch shown in the TAPE position
TAPE SPEED switch shown in the HIGH position

REVISION	DATE	CHANGE NO.
1	6 · 74	
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TEAC CORPORATION

PREAMPLIFIER

MODEL NO. A-6300 SHEET NO.

S-050

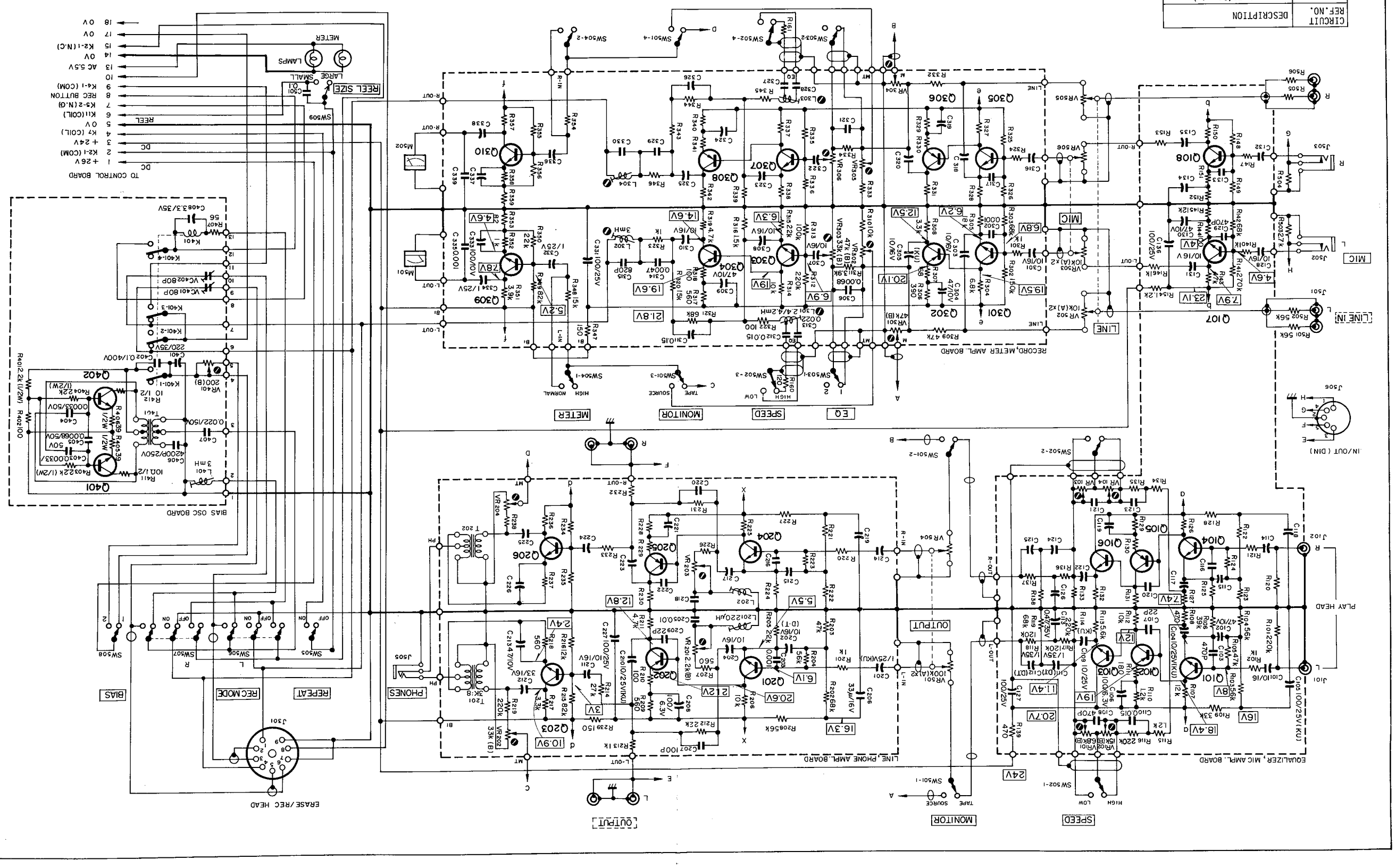
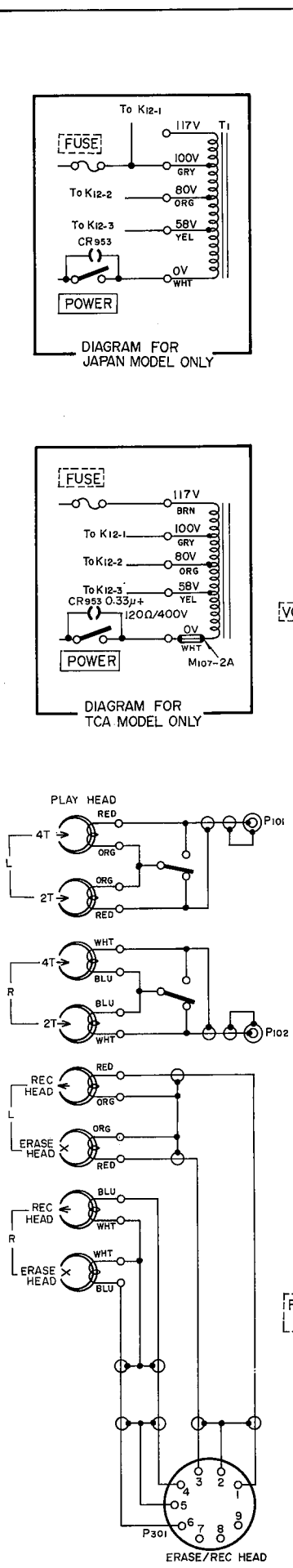
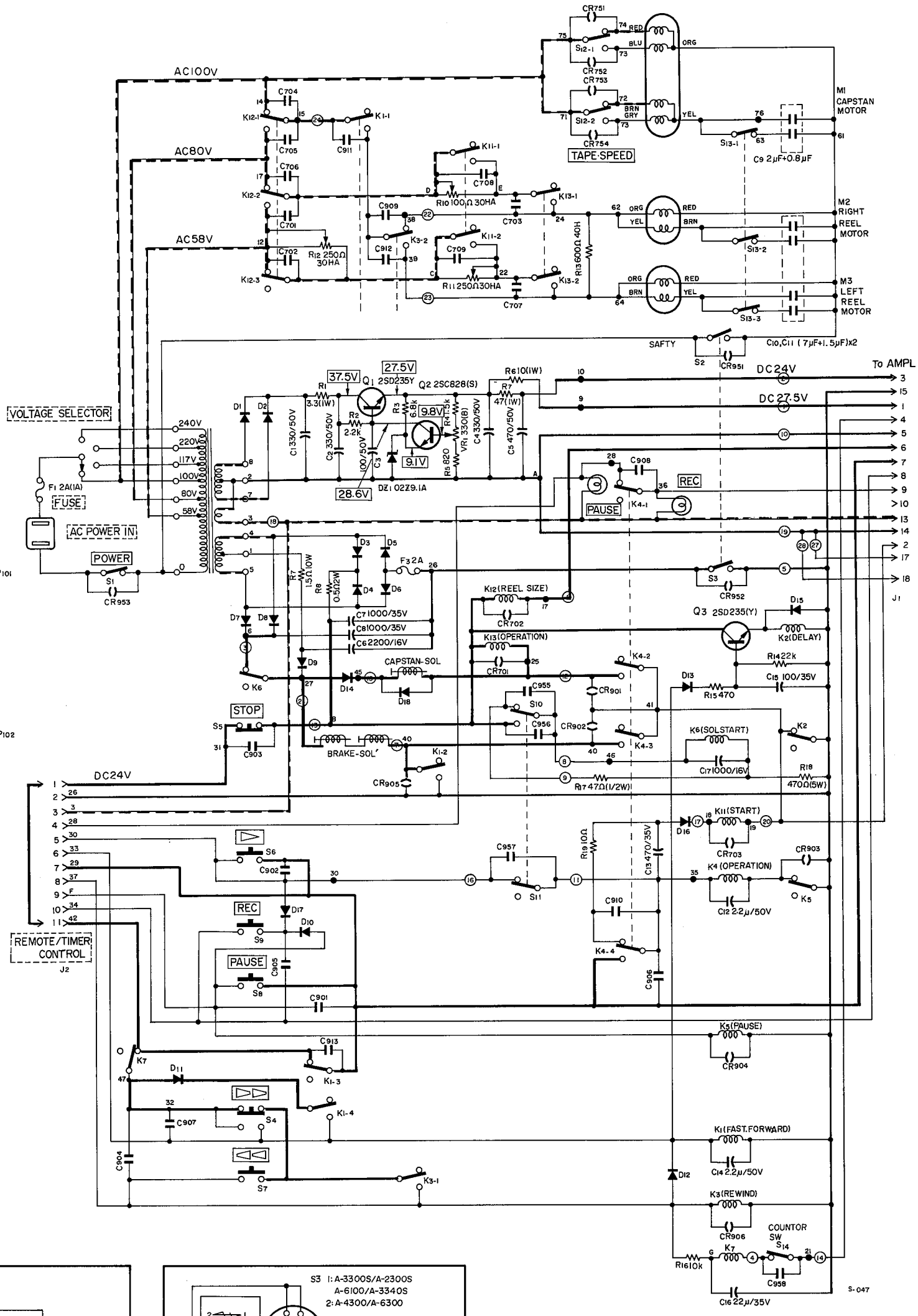
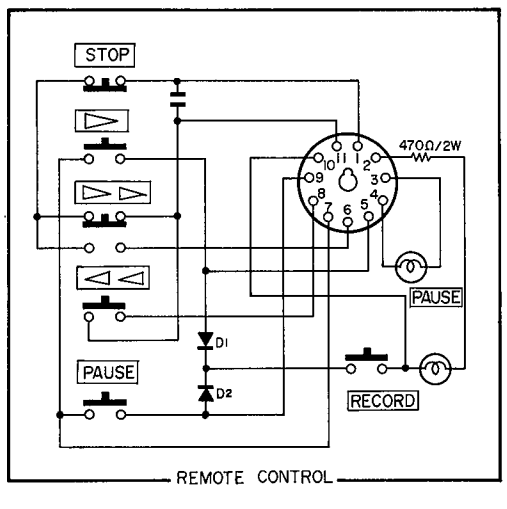


DIAGRAM FOR
JAPAN MODEL ONLY

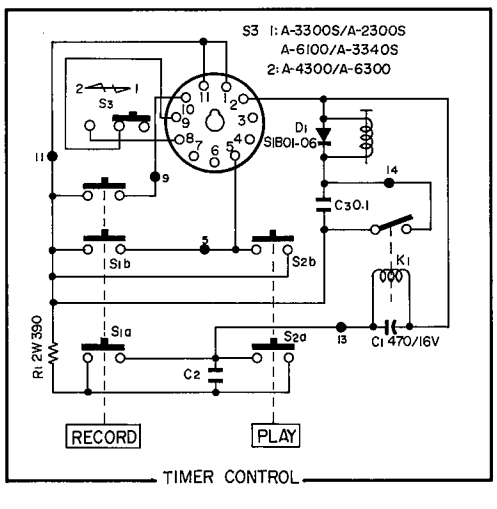
DIAGRAM FOR
TCA MODEL ONLY







REMOTE CONTROL



TIMER CONTROL

NOTES

Frequency Conversion switch shown in the 60 Hz position
All relays shown in STOP mode (de-energized)

———— : Indicates DC supply voltage
– – – – – : Indicates AC supply voltage

REVISION	DATE	CHANGE NO.
6	·	
5	·	
4	·	
3	·	
2	·	
1	6·74	

TAPE TRANSPORT

MODEL NO. A-6100

SHEET NO.

TEAC CORPORATION